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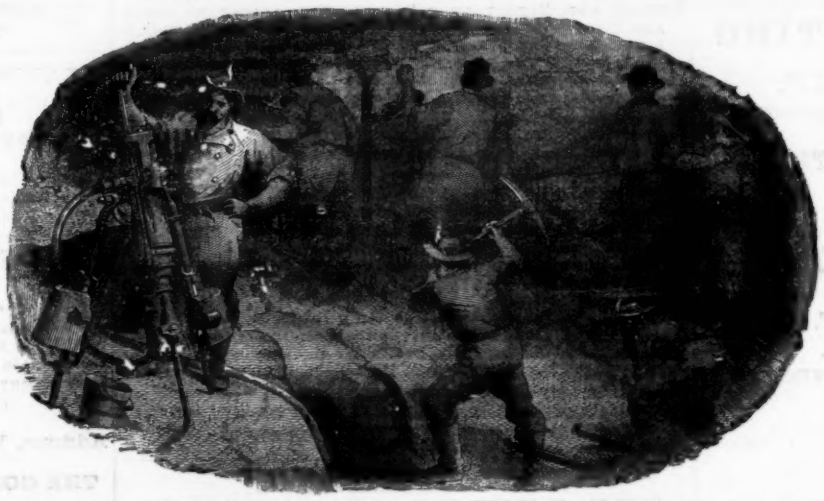

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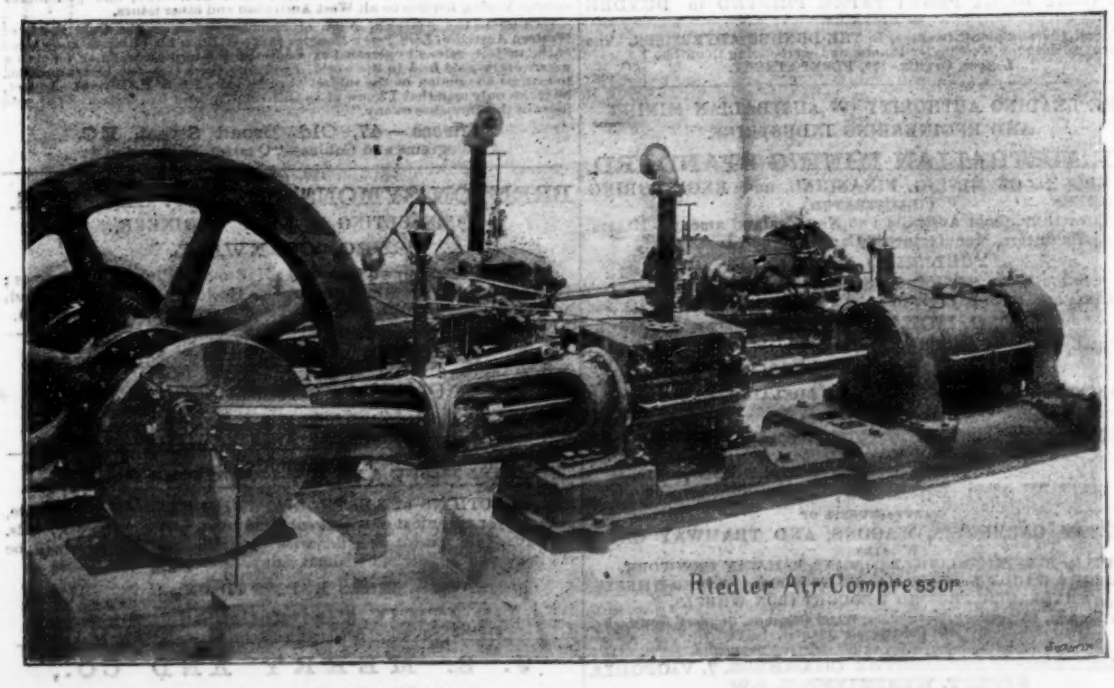

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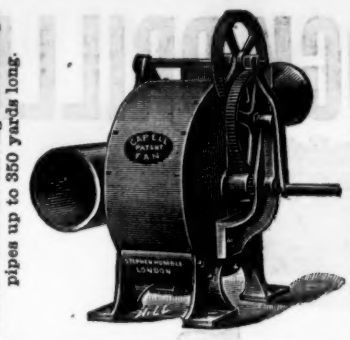

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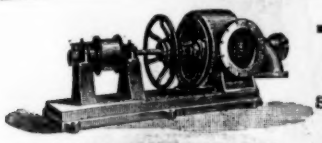

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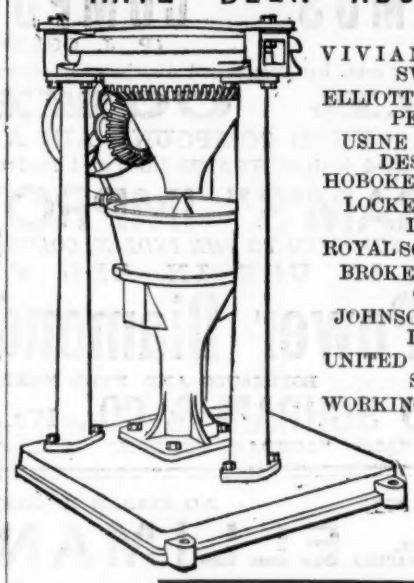

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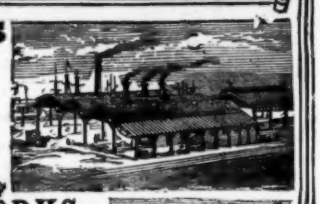

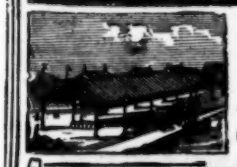

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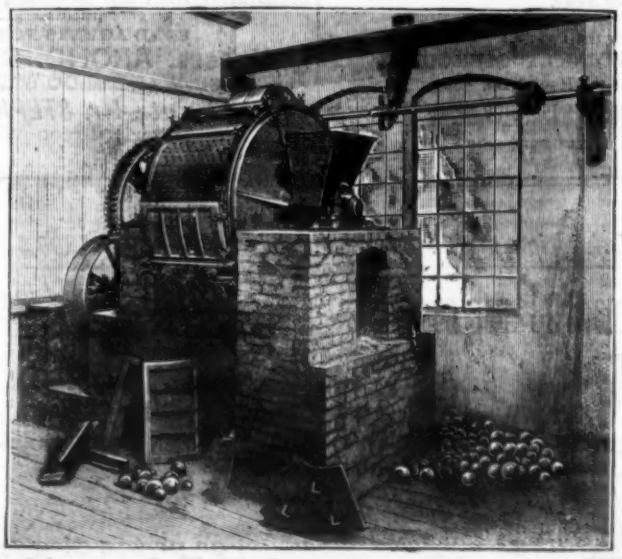
Francke's system. (15 to 20 per cent. better results than by old methods).



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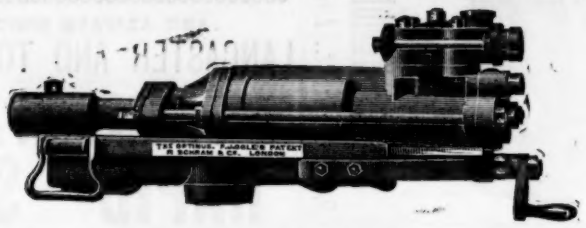

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Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.

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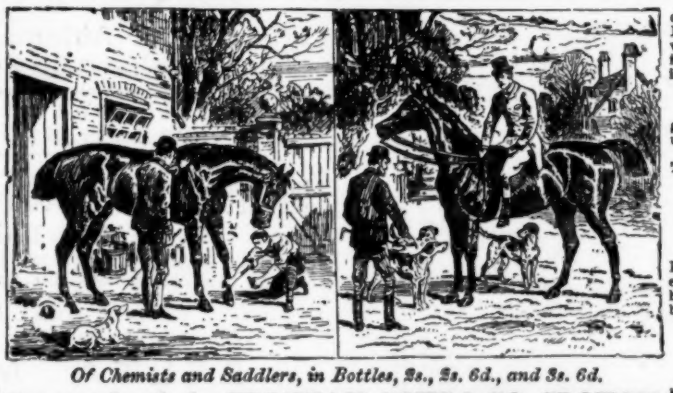

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Yours truly,
The Trafalgar Colliery Co. (Ltd,
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"I beg to inform you that the Royal Embrocation has been very efficacious by using it for the horses of my regiment, and I beg you to send again 25 bottles.
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"I find it invaluable for strains both in horse and hound."
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Has all the latest improvements resulting from 19 years' practical experience in constant work.

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The Index stands at 0 till the signal is given, when it points to the number of strokes on the Bell.

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Gold Medal, International Exhibition, Paris, 1889. *Gold Medal, Exhibition of Mining & Metallurgy, London, 1890.*

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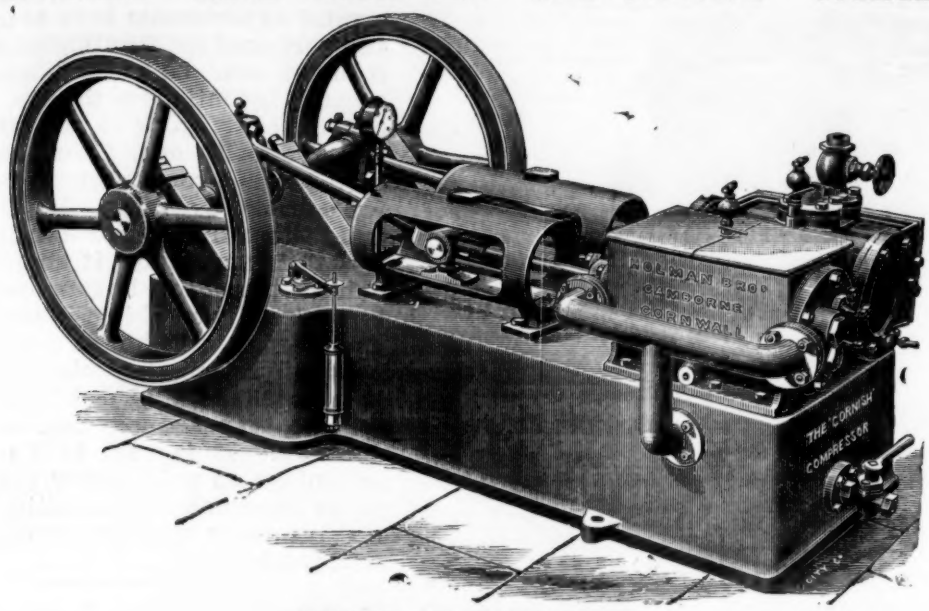

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS,** equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES,** and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Representative: Mr. E. M. TOUZEAU, Leadenhall Buildings, London, E.C.

JOHN DAVIS & SON,

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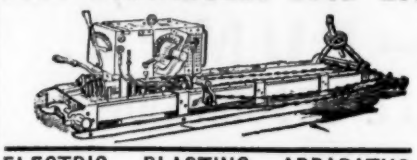
Jefrey Machines for Undercutting Coal,

WORKED EITHER BY ELECTRICITY OR COMPRESSED AIR.

OVER 500 IN USE.

FULL PARTICULARS UPON APPLICATION



ELECTRIC BLASTING APPARATUS.

HIGH OR LOW TENSION SYSTEMS.

REVISED CATALOGUE UPON APPLICATION.

SEC. A. MATHEMATICAL, MINING INSTRUMENTS, MINERS' LAMPS, &c.
SEC. B. ELECTRICAL PLANTS AND FITTINGS.

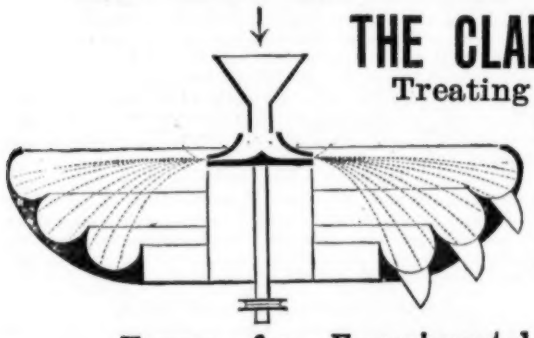
GOLD MEDAL, LONDON, 1862.
GOLD MEDAL, MELBOURNE, 1881.

IRON and STEEL TUBES (lap or butt welded) and FITTINGS for Gas, Steam, Water, Hydraulic, Compressed Air, and Heating Purposes, Black or Galvanised in stock to 8 inches diameter. Boiler and Stay Tubes, Water Mains Well Tubes, Pipe Lines, Telegraph Poles, Heating Coils, &c.

JOHN SPENCER, Globe Tube Works, WEDNESBURY. 14, Great St. Thomas Apostle, LONDON.

Highest Award at the Mining Exhibition, 1890.

DRY CONCENTRATION.



THE CLARKSON-STANFIELD CONCENTRATOR (LIMITED), are successfully

Treating the ores of Gold, Silver, Copper, Lead, Tin, Zinc, Cobalt, &c., &c. of all degrees of fineness, from 30 to the finest meshes by their NEW MACHINERY which may be seen in operation at

6, COLONIAL AVENUE, MINORIES, LONDON, E.

Homogeneous substances, such as Emery, Glass, Sand, Sulphur, Black Lead, &c., graded according to size in one operation.

Terms for Experimental Concentration, and for Supply of Machines on Application.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

9834 Arthur Albert Tattersall, 70, Wellington Street, Glasgow.—Improvements in drilling machines.—May 21.
9844 Arthur Ernest Jerram, 24, Craven Street, Coventry.—Improvements in gas and oil engines.—May 21.
9886 Erik Nilsen Otterholm, 19, Southampton Buildings, Chancery Lane, London.—A steam heated feed pipe.—May 21.
9889 James Carter, Sidney Carter, Frank Carter, and Welsher Carter, Billingshurst, Sussex.—Improvements in and connected with petroleum oil engines.—May 22.
9901 Edward Leggett, Newport Villa, East Cowes, Isle of Wight.—Engineers' combination steel trap wrench.—May 22.
9917 Henry Close, Bank Buildings, George Street, Sheffield.—Improvements in machines for crushing quartz and other materials.—May 22.
9933 Joseph Phillips, 7, Staple Inn, London.—Improvements in steam boiler and other furnaces.—May 22.
9934 Gordon Earl Adams, Howley Lodge, Maida Hill, London.—Self-generating electro magnetic motor for driving power.—May 22.
9957 William Arthur Ker, 191, Fleet Street, London.—Improvements in working hydraulic lifts, cranes, and other appliances, and in apparatus thereof.—May 22.
9980 George Milan Conway and Harold Green Underwood, 77, Chancery Lane, London.—Improvements in and relating to the construction of steam boiler furnaces.—May 22.
10007 James Yate Johnson, 47, Lincoln's Inn Fields, London.—Improvements in steam generators.—May 23.
10023 Thomas William Bourn and James Birrell Richardson, 2, Collingwood Street, Newcastle.—Air pump appliances.—May 23.
10038 Antonie Aristide Delpeyrou, and Leon Joseph Rousselin, 53, Chancery Lane, London.—Improvements in pumps.—May 23.
10040 Albert Taylor, 46, Lincoln's Inn Fields.—Improvements in drilling and boring apparatus.—May 25.
10047 Charles Frederick Wood, 45, Southampton Buildings, London.—Improvements in pressure gauges.—May 23.
10111 Samuel Oates, 24, Southampton Buildings, Chancery Lane, London.—Improvements in furnaces.—May 24.
10113 Henry Percy Holt, 28, Southampton Buildings, London.—Improvements in gas motor engines.—May 24.
10123 Sydney Pitt, 24, Southampton Buildings, London.—Improvements in gas motor engines.—May 24.

SPECIFICATIONS PUBLISHED.

8888, Yates, steam packing, 1893; 9077, Allison, furnaces, 1893; 9432, Sime, steam generators, 1893; 10642, Lake, steam boilers, 1893; 10,759, Bonichard, steam generators, &c., 1893; 11,568, Howden, steam boiler furnaces, 1893; 12,558, Chalmers, steam boilers, 1893; 12,796, Mayer, ingot moulds, &c., 1893.

The above specifications published may be had of Messrs. Rayner and Company 37, Chancery Lane, London, at 10d. each including postage.

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The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Colliery Timber, June 13 (*South Hetton*).—For the supply of all kinds of colliery timber from July 1 to June 30, 1895, for the South Hetton Coal Company. Forms of tender and specifications with full conditions to be obtained on application to Mr. J. R. Lambert, South Hetton, Sunderland.

Coal, June 14 (*Mullingar*).—For the supply of 250 tons of best Whitehaven screened coal, to be delivered within two months from the acceptance of tender, for the guardians. Tenders to Mr. David Harton, clerk to the Union.

Pump, June 15 (*Mallow, Ireland*).—For sinking a well and erecting a pump in the townland of Lissanisky, in the electoral division of Carrig; repairs to the pump at the northern end of the town of Buttevant; also making a walk around the interior of the Kilgobban Graveyard, near Abbargalls; well in the electoral division of Kilshannig, and certain other repairs necessary to said graveyard, for the Guardians of Mallow Union. Specification can be seen at the Board Room of the Workhouse.

Iron Fencing, June 26 (*London, N.*)—For supplying and fixing 1140 feet run, more or less, of wrought-iron boundary fence, stays, large and small entrance gates, &c., for Bruce Castle Park, Tottenham, for the Tottenham Local Board. Plan can be seen, and particulars and forms of tender obtained, on application to Mr. P. E. Murphy, engineer to the Board, Coombes Croft House, 712, High Road, Tottenham, any day during office hours.

Reservoirs (*Tottington*).—For the construction of a new reservoir and the enlargement of existing reservoirs at Stormer Hill Bleachworks, Tottington, for Mr. R. K. Roberts. Drawings and specification to be seen and all further information obtained on application to Mr. T. Nuttall, civil engineer, 12, Market Street, Bury.

Girders (*Ryde*).—For the supply of a large quantity of lattice girders for the bridges connected with a light railway in Mexico. Drawings and particulars can be obtained from Mr. R. F. Anderson, A.M.I.C.E., The Esplanade, Ryde, I.W., on payment of £1, which will be returned to all except the successful contractor.

Colliery Stores (*Penrhiwceiber*).—For the supply of stores and materials as follows, for the directors of the Penrikyber Navigation Colliery Company: (1) iron and steel; (2) castings; (3) bolts, nuts, rivets, washers and nails; (4) miners' lamps and lamp-glasses, &c.; (5) rubber, leather, waste, wick, brattice felt, packing and yarn; (6) steam, water and gunmetal fittings, &c.; (7) ironmongery, tools, heives, &c.; (8) paints, brushes, brooms, &c.; (9) timber; (10) wire ropes; (11) lime and cement. All information and forms of tender may be obtained by applying to the Secretary, Penrikyber Navigation Colliery Company, Penrhiwceiber, Glamorganshire.

OUR INQUIRY COLUMN.

TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post. All questions and replies should be accompanied by the name and address of the writer.

REPLIES.

A. Z.—We have a fair opinion of 2, 4, and 6. Of the others we know nothing.

CORNISHMAN.—We do not look for any rise at present.

SUB.—We would not advise a sale at the present low price. You should not purchase merely with the view of taking an early profit.

READER.—(1) You are entirely mistaken.—(2.) We think you would be wise to keep them.

F. H.—A dividend is expected shortly; therefore, you would do well to hold.

DEVONIAN.—As far as we know both firms are honest and influential.—(3.) We know but little of this company, but that little is in its favour. It were probably best to buy the shares.—(4.) We have but a poor opinion of the prospects of this company.

MINING NOVICE.—(1.) We know nothing of this company.—(2.) At the present time it certainly appears a good speculation.—(3) We think you could safely buy a few of these.—(4.) Ditto. (5.) Better wait and watch the company's career.

ALPHA.—(1.) In our opinion they seem a fair speculation.—(2.) It is impossible to tell.—(3.) Not for an *early* rise. We expect to see the shares rise, but not immediately.

FATAL COLLIERY ACCIDENT.—On Tuesday morning a sad fatality occurred at Washington Colliery to a wagonway man, named Robert Fullarton. By the rope of the hauling engine in the west pit getting a fast hold at the "clippers," some timber was drawn. The unfortunate man happened to be in the vicinity at the time, and was caught by the falling debris. When got out life was found to be extinct. Deceased was married, and leaves a family. In consequence of the accident, the pit was loosed out. Deceased was very highly respected in the district, and much sympathy is expressed for the widow and family.

DAVEY, PAXMAN & Co.,

Engineers, Colchester.

MAKERS OF

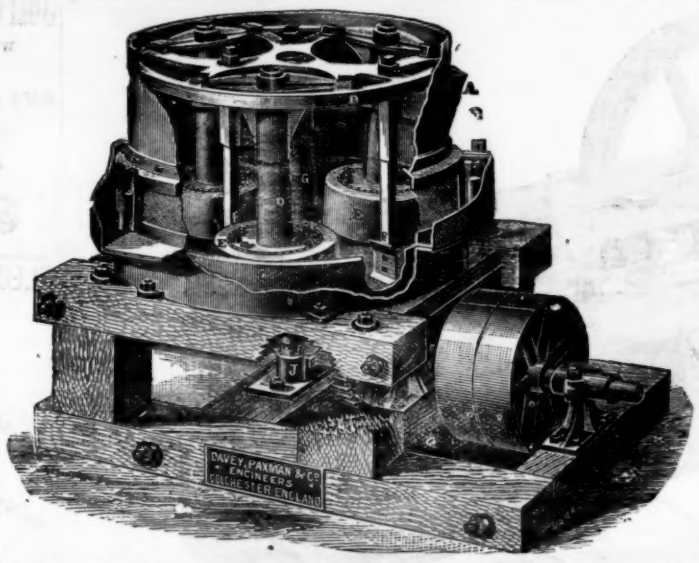
ENGINES, BOILERS, PUMPS.

AND ALL DESCRIPTION OF MACHINERY FOR MINING.

DAVEY, PAXMAN & Co., are SOLE Licensees and Manufacturers of the Huntington Patent Centrifugal Roller Quartz Mill for the whole World, excepting the United States of America, Mexico, and Australasia.

Telegraphic Address:

"PAXMAN, COLCHESTER."



Huntington's Patent Centrifugal Roller Quartz Mill for fine pulverizing in Concentration.

LONDON OFFICE
78 [late 139], QUEEN VICTORIA STREET.

D. P. & Co., after a great number of careful experiments have so improved and perfected the Huntington Mill that it must now be classed among the greatest inventions of the age. The excellence of its work is undoubted, and its superiority over Stamp Mills will soon cause a revolution in its favour for Quartz Crushing. Its first cost, and cost for freight and transit is much less than for stamps, it absorbs about half the power for the same output, and is continually crushing. It can be fixed and started in 12 hours, requiring for foundations only two pieces of timber 12 in. by 12 in. by 14 feet long, is more reliable than stamps, and has perfect delivery. It is used to its greatest advantage on gold quartz, for, because of its excellent amalgamating properties, it catches about 75 per cent. of the gold put into it.

Full Particulars on Application to

DAVEY, PAXMAN & Co.,
Colchester.

HOME MINING AS AN INVESTMENT.

(BY A CORRESPONDENT.)

MINING, subject as it is not only to great fluctuations in the market prices of its products (with the sole exception of gold, which is always valued in terms of gold), but also to unlimited geological uncertainties, must necessarily be more speculative in its nature than many other pursuits. But, I am convinced that as you pointed out last week, in spite of lower prices and foreign competition, 10 per cent. at least can be made at the present time if the selection be properly made by treating it as an investment. As regards the dividend mines of the West of England, there has rarely been any difficulty in making the selection. Suppose that at the prices of last summer an investor had decided to invest about £1000 in the eight leading dividend mines of the time, he might have had 10 shares in Carn Brea, costing £120; 2 shares in Dolcoath, costing £160; 100 shares in Devon Consols, costing £100; 10 shares in East Pool, costing £110; 40 shares in Killifreth, costing £120; 10 shares in Tincroft, costing £130; 20 shares in West Kitty, costing £140; 10 shares in Wheal Grenville, costing £160. Total, £1040. The yield in dividends during the year—no calls having been made—would have given him £114 5s., or almost exactly 11 per cent., and if he wished to sell his shares, he could do so to-day without loss—perhaps with a little profit—in spite of the fall in tin. So much for the investor simply, for with such a selection the risk lies between getting a return of 2 or 3 per cent. only, and getting from 20 to 30 per cent.: of absolute loss there cannot be said to be any risk whatever. But now let us suppose the same investor had made up his mind to risk say £300 in four so-called progressive (*i.e.*, calling) mines, he might reasonably have made the following purchases:—60 shares in South Condurrow, costing £60; 100 shares in South Crofty, costing £50; 40 shares in West Frances, costing £60; 100 shares in Wheal Kitty, costing £37 10s.; total, £207 10s. The calls in these mines during the past year have been heavier than was expected, so that our investor will have had to pay no less than £162, making the total cost of his holding £369 10s., instead of the £300 he had reckoned upon. But at the prices of last week they might have been resold for £390, so that even here our speculator would have made over 9 per cent. Of course, he might have made a worse selection if he had been badly informed, or badly advised, but even then his risk need not have been great. Here, for instance, is another selection:—20 shares in South Frances, costing £30; 8 shares in Wheal Agar, costing £40; 10 shares in Wheal Basset, costing, £40; 40 shares in West Phœnix, costing £30; 100 shares in Polberro, costing £50; total, £190. The calls on these shares during the year have amounted to £49 14s., so that the total cost of the holding amounts to £239 14s., the present sale value being £212, so showing a loss to date of under £30. And taking the whole of the investments together as given above (though we think the *proportion* of progressive investments far too great for prudence), it will be seen that even during a time of abnormally low prices, an outlay of £1649 has yielded an income of almost exactly 7 per cent.; the total sale value of the shares at the end of the period being almost exactly the same as at the beginning.

MONMOUTHSHIRE COAL.—The United National Collieries Company, Limited (Watts, Ward and Co.), contemplate at once sinking pits at Cwmcarn, near Abercarn, and it is expected that this enterprise will lead to a largely increased output of coal. The Great Western Railway with the view of enabling sinking operations to be carried out on Lady Llanover's property, which environs Abercarn, are seeking powers to extend what is locally known as Hall's Railway. At Six Bells, Aberbeeg, new pits are being sunk by Messrs. Lancaster and Co. (Limited), and an output of coal is expected equal to that at the firm's present collieries at Llanhilleth. The new pits of the Ebbw Vale Company, near Cwm, have been laid down on the double lift system, by which a greater celerity in the bringing of coal to the surface is attained. Messrs. Partridge, Jones, and Co., the owners of the famous Llancrch Colliery, have won steam coal near Crumlin; and in the eastern valleys the Tirpentwys Colliery Company have won the celebrated black vein steam coal. Indications are thus given on nearly every hand of a largely increased development of mineral wealth of Monmouthshire. —*South Wales Daily News.*

MINING IN CORNWALL AND DEVON:

NOTES ON WESTERN MINING, EDITORIAL AND OTHERWISE.

STAGNATION still reigns supreme over the share market, in spite of important improvements which have taken place in one or two of the mines, which, had there been any speculative spirit abroad, would have caused some animation. The outlook is not one whit more hopeful, and a feeling of uncertainty with regard to the future of the tin market still prevails.

INTEREST just now seems to be largely centred in the St. Agnes district, where mining is apparently looking up, and affairs have assumed an aspect which, considering the general depression, may be described as cheering. Polberro meeting on Monday was decidedly encouraging, and the shareholders have, undoubtedly, ground for the belief that they are opening up a very valuable property. Of recent years, Polberro has not, perhaps, been worked so vigorously as some of the Cornish shareholders could have desired, but with the advent of Captain Charles Thomas more energy seems to have been infused into the management, and the development of the mine is being pushed on with all possible speed. In the last four months they have passed through some very fine branches of tin, and have now met with a strong, well-defined lode, which Captain Thomas reports to be the South House lode. The shaft is to be immediately sunk, with the object of finding the lode still richer in depth. This lode is a point which they have been working for some time, and there is every prospect of it proving a valuable discovery. The cost of working is so trifling that a comparatively small quantity of tin would pay costs, so that if the property turns out as well as the indications seem to foreshadow, substantial profits are assured.

AT West Kitty arrangements are in progress for the new work for which the call of 10s. a share was made last week. Work has been suspended in the south part of the ground preparatory to changing the pitwork and sinking the shaft. There will be a good deal of stuff to come away during the time the work is in progress, quite sufficient, it is believed, to keep the stamps going. When the new pitwork is in and the water in fork, much greater facilities will be available for the opening out of the valuable ground which is in this part of the mine.

AT Blue Hills they have a remarkably good improvement, and the lode was unofficially valued this week at £100 per fathom. This, at the present price of tin, must be a splendid lode, and it must be gratifying to the shareholders to know that the point for which they have been working has turned out almost beyond their expectations. Blue Hills, like Polberro, is being worked at very moderate cost, so that a good bunch of tin would mean profits for the adventurers in a very short time.

THE choke in the shaft at Dolcoath has not yet been cleared, and there is no means of knowing when it will be. They must be getting very near the end of it, and it was stated this week that they had now only about 2 fathoms more to get through. Most of the surface hands are working at about half time, and so are a few of the underground men. Even when the choke has been cleared there will remain a good deal of work to be done before the bottom levels can be opened up again.

OWING to the success which has attended the operations of the small syndicate which was formed less than two years ago to work the famous "Old Great Work" Tin Mines, Breage, we understand that an extended company is now being formed under the most influential auspices, for the purpose of developing, on a larger scale, this property. These mines in the past have produced over £600,000 worth of tin from comparatively shallow workings.

IN addition to the libel action which Mr. Arthur Strauss is bringing against the *West Briton*, in connection with the Wheal Uny liquidation, there will be heard at the Bodmin Assizes next week, a case in which a relative of one of the victims of the Wheal Owles disaster sues the adventurers for damages under the Employers' Liability Act.

WEST AUSTRALIAN GOLD FIELDS, LIMITED.

An encouraging circular.—Another property secured.

THE following circular has been issued to the shareholders of this company:—As you will no doubt be anxious to know what progress the company is making, I have the pleasure to give you the following information.

Prospecting Parties.

It was thought advisable by the local directors to delay despatching prospecting parties to select claims on the Hampton Lands Concession until the early part of May, but these claims are now being selected, and as there is no doubt in regard to the auriferous nature of the reefs already discovered there, the directors expect on return of the prospecting parties to be able to announce that some good claims have been taken up. In the meantime Lord Percy Douglas has secured a claim for the company at Kurnalpi, which is to the north of Coolgardie, and also another claim at Coolgardie, which is reported to be an extension of Bayley's reef. Further particulars will, no doubt, come to hand by mail.

Mawson's Reward Claim.

The recent issue of Mawson's Reward Claim (Limited) has resulted very satisfactorily to this company, and as soon as the transfer of the property (which is now being carried through in Australia) has been completed, a further circular on this subject will be issued to the shareholders.

White Feather Reward Claim.

It is with great gratification that the directors are able to announce that owing to the zeal and energy displayed by the company's representatives in the colony, that the Reward Claim in the White Feather district has been secured by this company. The claim has been examined by Mr. Mercer, of the firm of Bewick, Moreing and Co., the company's consulting mining engineers, who has cabled to the following effect:—

"Am glad to inform you we have secured a first-class property in McAuliffe's Reward Claim at White Feather; it comprises 21 acres; I strongly recommend purchase. The property is a good one; act promptly. The future prospects of the West Australian gold fields are excellent."

Mr. Saunders, who has returned to Perth, has also cabled that he and the local directors strongly advise the purchase of this claim, and under these circumstances the directors have closed with the offer, but the shareholders will be glad to learn that the cash consideration was small, and that the owner is looking mainly to future results for his profit.

It will be necessary to form a separate private company to work the claim in order to give the vendor the shares he takes in part payment for the property, and a considerable portion of the shares will accrue by way of profit to the West Australian Gold Fields (Limited).

Probable Distributions.

The directors think it right to point out to shareholders that dividends must be calculated upon the amount paid on each share, and consequently those shareholders who pay up their shares in full will be entitled to five times the dividends in cash or shares accruing to shareholders who have only paid 4s. per share; some shareholders have availed themselves of the privilege of paying up in advance in order to secure this advantage, and the directors wish it to be clearly understood that all shareholders are entitled to adopt the same course and secure the same benefits.

Future Information.

It is the intention of the directors to issue circulars from time to time giving information to the shareholders.

DURING April the average mill yield at the Langlaagte Royal Mine was 8·26 dwts. per ton—a distinct advance on the improving return of the previous months. The value of the gold won was £13,172, and the working costs were £6513. In addition, £1325 was spent on extra development in view of the doubling of the milling power in July, so that the profit for the month was £5334l.

GEOLOGICAL COINCIDENCES IN VICTORIA.

By WILLIAM NICHOLAS, F.G.S.

RESPECTING the correspondence that has appeared under the above heading in your Journal, I think it right you should see the enclosed correspondence that appeared in the *Bendigo Independent* on the same subject, as it will throw a local light on this much-discussed report or monograph, as it is called, on the Bendigo gold field.

The articles I wrote for *The Mining Journal* will probably be published and obtainable in pamphlet form in London ere this letter arrives, so that any one sufficiently interested can procure it and ascertain what you published in 1884. Those persons who care to read it will observe that I wrote those articles on "The Golden Quartz Reefs of Australia" for the information and, I hoped, instruction of the numerous readers of your widely-circulated *Mining Journal*. And it was because of its extensive circulation in all parts of the world where mining is conducted that I chose your Journal in preference to magazines or transactions of societies of more limited circulation. I know that your Journal is read by miners, managers, or captains, directors, and shareholders in mines, and of all these, perhaps, I wrote more for the miners and the young mining students than the others, and I desired to obtain some equivalent from them in return, thus making your Journal a still greater medium of exchange of mining information from all parts of the world.

Mr. Rickard repeats from his side of the world the same sentiment of a certain person on this side that I should be highly pleased to find I have been corroborated—unacknowledged.

Well, I cannot say that I do highly appreciate the position from all points of view, any more than they would if we changed about. But from one point of view I most sincerely appreciate the service they have unwittingly conferred on me—inasmuch as it will probably show your readers that the information I supplied them about the Bendigo gold field 10 years ago will still bear repetition and publication. I, therefore, take this opportunity of thanking Messrs. Dunn and Rickard for their thoughtful consideration of your readers, your *Mining Journal*, and myself.

I have not read Mr. Rickard's description of the Bendigo gold field, but I hope to have the pleasure of doing so, and seeing, as he suggests, the possibility of coincidences in his work and mine. Should I ever visit Denver I hope to be able to corroborate anything Mr. Rickard may have written a decade since on any first-class mining district of America.

Mr. Rickard occupies a very different position from that of Mr. Dunn—the latter was engaged two years over his report, at least, ere it was published, and Mr. Rickard probably two months or less; the one was a resident of Bendigo, the other a passing visitor.

The Mining Journal is filed in the Mining Department (Geological Survey Office), the Public Library, the Exchange, &c., in Melbourne, and I believe at the Mechanics Institute, &c., Bendigo.

The critics of Mr. Dunn's report on Bendigo were Mr. William on, Secretary of the Mining Managers' Association, of Bendigo, and the Hon. H. R. Williams, M.P. for Eaglehawk, the North Division of Bendigo, and some time Minister of Mines of Victoria.

The letters herewith, taken in conjunction with their several dates, explain themselves, and require no comment.

15th July, 1893.

WHAT USE IS IT?

To the Editor of the *Bendigo Independent*.

SIR,—I observed Mr. H. R. Williams, in an article published in your paper on the 17th inst., said I would have given Mr. Dunn, geological surveyor, information about Bendigo reefs in the early days. He rightly interprets my desire in this matter. I have always had great pleasure in assisting others to a better knowledge of the great Bendigo gold field—quartzopolis, the most unique mining field, so far as I can ascertain, in the universe, and the one most likely to aid the investigator to a true conclusion as to the origin of reefs, loder, or veins. For the information of any one who may write about Bendigo saddle reefs in future I now give a list of my papers on this subject as an addition to the "Bibliography on Bendigo Reefs." In 1863 I wrote to *Dicker's Mining Record* about Bendigo reefs and lava dykes, and about the latter I said:—"I think it would well repay miners if they gave these guides to reefs even more attention than at present, for, Sir, miners do not neglect them in their calculations." In 1864 and subsequently I wrote descriptive letters of the Bendigo gold field quartz reefs to the Secretary for Mines (R. B. Smyth). At this time I was making small collections of typical mineral specimens of the Bendigo reefs and strata, including (graptolites) fossils, which I sent to England and to the Secretary for Mines. In 1867 I sent a detailed description of the Bendigo gold field to the Royal Geological Society of Cornwall, together with illustrative specimens, &c., and plan of the gold field (geological and mining). This was subsequently published in full by Cornish papers, and condensed afterwards by the *Melbourne Australasian*, March 6, 1869. In addition to the plan, I just find out I also sent longitudinal and transverse sections regarding the former section, a typical one of the Bendigo reefs. I said—"You will observe in the longitudinal sketch sections of reefs forwarded herewith that they have a general dip (pitch) to the north. The reefs of the Sandhurst district run parallel to the adjacent strata, and the upper portion of every reef terminates in a cap, or, I believe, did so prior to its being denuded of it, so their formation has the appearance of an inverted V. At more or less distance directly beneath the upper reef another occurs—so far as I have observed totally distinct and separate from one another—and this supposition holds good to the greatest depth as yet proved in this district. The quartz of nearly every reef is striated in its laminæ or on its sides. The slate and sandstone adjoining the reefs (and sometimes the reef itself) have more or less polished sides. These phenomena appear to be evidence of a consistent and regular movement in the strata in which our quartz reefs are situate. I may state that I am a mere gatherer of such facts as are here presented to you, holding no special theory or theories of my own on the formation of quartz reefs."

In 1871 I wrote, at the late Mr. J. N. Macartney's invitation, a short article, viz.:—"Notes on the Quartz Reefs and Mines of the Bendigo Gold Field," for his second edition of "The Bendigo Gold Field Registry." After speaking of the saddle formed reefs and strata in these notes, I said—"It is a matter of the first importance to those who control the mining operations of a mining company that they should be satisfied—if they have saddle formed reefs in their mine—of the position of the crown or 'centre' of the saddle. From this 'centre' line to the east reefs will have an eastern dip (underlie) and to the west a western dip. This point 'once settled, then a more comprehensive idea can be formed of the most economical method of laying out the position of shafts, levels, and cross cuts."—1880-81. The outlines of my views were also given in my "Free Lectures" at the School of Mines by the *Bendigo Independent* and *Bendigo Advertiser* newspapers between October 28, 1880, and August 26, 1881, when the Council for the time being saw fit to stop them.—1884. In the London *Mining Journal*, July 19, 1884, I began a series of articles on "The Golden Quartz Reefs of Australia," specially descriptive of and illustrating by woodcuts the saddle reefs of Bendigo. These appeared weekly or monthly right through 1884, and occasionally about other Australian gold fields up to 1887, and I am aware that some of these articles were reprinted in America.—1881, In the *Bendigo Independent* of August 18, 1881, appeared a precis of a paper I read before the Royal Society of Victoria on "The Origin of Gold and Quartz Reefs," and this embodies the views on those subjects that I hold without important modification to the present time. But I am ever ready to modify my ideas so soon as I am satisfied of the proposition of others being more reasonable and capable of explaining away most of the difficulties of the subject. I do not claim much originality in that last mentioned paper; it is mainly modifications of other men's life work. Nor will you perceive do I pretend to have discovered the "axial key" to Bendigo, although as you see I have written about it for the last 30 odd years. If you ask me who discovered the "axial keys" I would say Gibbs and Lazarus, and Latham and Watson. When surveying the claims of those miners with my brother in the 50's I sketched the two outcrops, which then simply resembled two railway tunnels into the earth's crust dipping or pitching north.

Mr. Dunn is quite right. You do not appear to have "fully" grasped the "axial key." You see, you've only got your longest digit down a small matter of 3000 feet in the "centre country" as yet. I think I was the first to make underground geological mining sections on Bendigo (for the Catherine, Victoria, Hustlers, St. Mungo, &c., Companies, before 1864). But although I had made many sketch sections showing saddle reefs occurring one below the other, and urged their proper detailed construction on the Mining Department, yet I believe Mr. Arthur F. Walker's plan and sections of the Hustler's Reef were the first comprehensive survey of this class made on Bendigo.—Yours faithfully,

WM. NICHOLAS.

P.S.—As no bibliographical list of the many papers, reports, plans, sections, books, pamphlets, &c., which have been more or less specially written on this interesting subject of the "Bendigo Saddle Reefs"—so far as I can ascertain—has ever been published, here is an opportunity for some young member of the A.N.A. or Mining Association of Bendigo to do a local patriotic public service. It might be of considerable assistance to Mr. Dunn in the compilation of the second portion of his monograph on the Bendigo gold field.

WM. NICHOLAS.

Bendigo Independent, 2nd August, 1893.

THE HON. H. R. WILLIAMS, AND MR. E. J. DUNN.

In reference to the letters written by Mr. Nicholas and the Hon. H. R. Williams, recently published in the *Bendigo Independent*, the following has been forwarded to us from the Mines Department for publication:—

Underground Survey Office,
Bendigo, July 25th, 1893.

SIR,—I have the honour to bring under your notice the enclosed two letters, published in a local newspaper. Without explanation, the letter written by Mr. Nicholas is difficult to understand. In the letter written by Mr. Williams a distinct charge of plagiarism is made. Communications couched in such language deserve to be simply ignored, but lest my silence should be misconstrued at some later period, I may state that I have neither seen nor heard of the articles referred to, and I very much doubt if they have any bearing whatever on the subject as treated in my report, which embodies my personal observations. If my work has been anticipated in any part, no one would be readier to acknowledge the work of others in the same field if brought to my notice, but I cannot undertake to make myself acquainted with all the files of ancient newspapers that exist.—I have the honour to be, Sir, your most obedient servant,

E. J. DUNN,
The Secretary for Mines, Melbourne.

5th August, 1893.

*WHAT USE IS IT?

To the Editor of the *Bendigo Independent*.

SIR,—Mr. Dunn, in his letter *re* "What use is it?" published by you on the 2nd inst., says ". . . . Without explanation the letter written by Mr. Nicholas is difficult to understand. . . ." My letter begins thus:—"I observed Mr. H. R. Williams, in an article (No. 1) published in your paper on the 17th inst., said I would have given Mr. Dunn, geological surveyor, information about Bendigo reefs in the early days. He rightly interprets my desire in this matter. I have always had great pleasure in assisting others to a better knowledge of the great Bendigo gold field." Then as practical proofs of my sincerity to render such assistance to any and every one I gave a few extracts from what I had written in the past, and gave the date, year, and journals. "For the information of anyone who may write about Bendigo Saddle Reefs in future . . . . and as an addition to the bibliography of Bendigo Reefs."

And I may now state that all I have written about Bendigo—excepting only my lectures at the Bendigo School of Mines—was done for the love of the work of assisting others to the best of my ability unstintingly, and not for pay in any shape or form. If Mr. Dunn will read a letter of mine published in the London *Mining Journal*, August 2nd, 1884, he will observe the editor of that Journal says:—"The above are extracts from a private letter from Mr. Nicholas, not intended by him for publication—in fact, it enclosed that published in last week's *Mining Journal*—but the observations and suggestions appear so valuable that we have taken the liberty of printing them." That letter will verify what I have now stated. I may tell you, Sir, that the Editor of *The Mining Journal* asked my permission to have woodcuts made (at *The M.J.'s* expense) of the diagrams which I had sent to assist the "reader" if my MS. was not clear. I am glad of the opportunity of mentioning this, as it illustrates the public spirit of that Journal, and is evidence of its wish to disseminate information about "Bendigo." The Editor of *The Mining Journal* is a perfect stranger to me.

When I wrote the letter Mr. Dunn refers to I had but glanced over his monograph, and my impression was that it was, to use his word, "ancient history" so far as Bendigo is concerned. Since then I have more attentively read this monograph, and I still think that a "bibliographical list" "of the many papers, reports . . . which have been written on the subject of the Bendigo Saddle Reefs . . . might be of considerable assistance to Mr. Dunn in the compilation of the second portion of his monograph on the Bendigo gold field." I always try to write in plain, simple English, and I trust it is not my fault if Mr. Dunn cannot grasp it.—Yours, &c.,

WM. NICHOLAS, F.G.S.

The Exchange, Melbourne, August 3.

Evening Standard, 12th February, 1894.

Mr. E. J. Dunn, geological surveyor, who had been conducting the underground survey at Bendigo, recently threw up his engagement and went to Western Australia, intending to return and resume in a month or so. He was not a classified officer of the Mines Department, but was paid out of the geological vote. The Minister questioned Mr. Dunn's right to take other engagements at will, and the geologist's connection with the department has been terminated. Until other arrangements are made, the assistant Government geologist will take up the underground survey work at Bendigo and Ballarat.

Argus, 13th February, 1894.

Mr. E. J. Dunn, who has been engaged by the Mines Department for some time past making an underground survey of Bendigo, recently asked for leave of absence to undertake to report on mines at Coolgardie, Western Australia, for a syndicate. Seeing that Mr. Reginald Murray, the Government geologist, is at present in New Zealand in response to a request by that Government for his services, the Minister of Mines informed Mr. Dunn that he could not be spared. Notwithstanding the Minister's refusal Mr. Dunn has gone to Western Australia, and his engagement has been cancelled. Mr. Stirling, assistant Government geologist, will continue the work begun by Mr. Dunn at Bendigo.

* This is the heading of the Hon. H. R. Williams's lengthy (week by week) criticism of Mr. Dunn's report on the Bendigo gold field.

A NEW FIELD FOR NAPHTHA AND PETROLEUM INDUSTRY IN NORTH RUSSIA.

By JOHN ROBERTS, M.E.

No. III.

THE means of communication is an important consideration for any industry, for, whatever the facilities may be for the production of the article, the success of the enterprise after all may depend on the facilities for its transport. As stated at the commencement of these articles the late M. Sideroff spent a great number of years in the enquiry into this matter, with the result of showing to a demonstration that these naphtha beds are more favourably situated than those of Baku. The writer does not think it necessary to add a map in order to illustrate this point, as anyone may take an ordinary map of Europe and judge for himself how advantageously the Uchta beds are situated, and will be able easily to follow the routes which will be here very briefly sketched. It will be seen at a glance that as far as the supply of Central and Northern Russia are concerned, as well as Sweden and Norway, Great Britain, Denmark, Belgium, Holland, Germany, France, Spain, and Portugal, the Uchta beds are more favourable. For example, if we take the route *via* Petchora Bay, the distance, following the Rivers Uchta, Ishma, and Petchora, is, on those rivers, 626 miles, and is always accomplished in three days, and from there to Antwerp in 9 or 10 days more.

It has been proposed to build special river boats or barges of a capacity from 750 to 1500 tons of naphtha. These, it is said, can be built very cheaply, as there is an abundance of wood that can be had for hewing it, and in the province of Archangel there are plenty of competent boat-builders.

The aforesaid rivers being navigable from the middle of May to September, those boats or barges will be occupied carrying the natural product to the distilling works, store-houses, &c., to be built at the port of Eritikir, situate near the promotory Rybatchy, which is never frozen up, and the Mourman Coast being navigable at all seasons, the manufactures from the natural products, as well as shipments of the same, will be carried on without intermission at that port. These works would be chiefly for export to the various countries of Europe. But it will be seen at a glance how much more favourably Eritikir is situated than Baku for the ports of the Baltic. Passing along the Scandinavian Coast to Liban, Revel, Riga, St. Petersburg, Helsingfors, Uleaburg, &c., vessels would arrive under much more favourable conditions, and in less time. The same applies to the ports of Antwerp, Havre, London, and even Marseilles. Then, as far as America is concerned, she is not in it at all.

For home consumption it is proposed to erect the distillery works at Vologda, which is only 483 kilometres from Moscow by rail, and 947 kilometres to St. Petersburg by canal. Vologda will be reached by a projected light railway, which will cost £240,000, to Vesliany, a distance of 128 kilometres; then by the Rivers Vym, Vytchegda, Malaga Dwina, and Soukhoupa. From this centre Western Siberia can be reached much easier than from Baku, for the whole distance by water and rail to Sosva is only 1146 miles, whereas from Baku it is more than three times that distance. On the completion of these projected works Russia will be able to supply the whole of Europe with petroleum. Uchta will supply the north-west and Baku the south-east.

Although it would appear at first sight that the question of labour is an important one, yet there is no difficulty whatever anticipated. It is said that the population on the banks of the Rivers Vym and Vytchegda could alone furnish many tens of thousands of workmen, who actually go to the manufactories of the Ural and to Western Siberia to find work in winter. That being the case it must be evident that the labour question is no obstacle whatever. It is quite astonishing to us how those people can manage to live when away from their homes. They simply make a hut with turf, or dig out a hole in the side of a hill, and their home is made directly. They require no furniture, and very few cooking utensils, and they live on chiefly what is about them. In the region of which I write they live chiefly on fish and game, which are very plentiful. As to meat, they eat the flesh of the stag, which makes an agreeable and wholesome food. This animal is very plentiful also. With regard to meal for making bread, &c., although not grown on the spot, it is very cheap, on account of the facilities of transport by water.

Wages here, as in other parts of Russia, are only from 40 to 50 kopecks per day—that is from 10d. to a 1s. The latter is considered high for good workmen.

Materials for construction they find nearly all on the spot, and what else may be required, at the rich village of Ust-Ishma. But as it is contemplated to make the distilleries elsewhere, as aforesaid, it will be only necessary to organise the system of boring and storage wells.

This is certainly a very gigantic affair; but it is no more so than the industry at Baku. Indeed, what I have anticipated here for those fields will not compare with the present state of the industry at that place. But from the present prospects there can be little doubt as to the richness of the country, and the result of a vigorous development.

THE TERRAS SYNDICATE (LIMITED) AND JAMES HENRY HARRIS JAMES.—This action was commenced in August last against E. B. Beauchamp, Esq., to restrain him from interfering with the plaintiff's mine, situate at St. Stephens-in-Bramwell, Cornwall, and damages for trespass by him, and the action was down for hearing before Mr. Justice Mathew and a Special Jury on the 4th inst. Upon the case being called on for hearing it was stated by counsel for the plaintiffs that the latter and defendants had come to terms, and counsel for defendant submitted to judgment against his client, Mr. Beauchamp, for an agreed sum for damages, defendant to withdraw a deed of revocation set up by him, and the defendant to pay plaintiffs' taxed costs of the action. The counsel for the plaintiffs were Mr. A. R. Jelf, Q.C., Mr. H. W. Loehnis, Mr. S. King Farlow, and Mr. W. Molesworth St. Aubyn, instructed by Messrs. Farlow and Fuller, Solicitors, of London, and the Counsel for the defendants were Mr Lawson Walton, Q.C., Mr. McLeod, instructed by Messrs. Hearle, Cook, and Parkyn, Solicitors, of Truro. The most important point in the history of the working of this mine has been gained through this action, as the owners are now at liberty to sink a new shaft at a point in the sett so as to complete a practical development of the mine which has hitherto been delayed owing to disputes. It is acknowledged by the principal mining experts of Cornwall to be one of the best mines in that county.

FROM a Melbourne report it appears that the sluice boxes at the Red Hill Mine, near Chewton, have been recently robbed, so a member of the Castlemaine Mining Board, and a shareholder in the company, hid himself with a gun near the sluice boxes. About three o'clock he noticed a man removing the contents of the sluice box, and fired. The shot apparently took effect, for the man rolled over the embankment, and then decamped.

MEETINGS OF MINING COMPANIES.

POLBERRO.

Call of 1s. per share.—Mining prospects in St. Agnes mining district.—Interesting speeches.

A SIXTEEN-WEEKLY meeting of Polberro adventurers was held on the mine at St. Agnes, Cornwall, on Monday, Mr. JOHN B. REYNOLDS, Chairman of the company, presiding over a large attendance.

The statement of accounts (which had been duly audited and certified as correct by Mr. A Gostick, auditor), from February 6 to May 31, showed:—Receipts: To arrears of call of October 23, 1393, £10 10s.; call of 1s. per share made on February 9 last, less £2 on 40 forfeited shares, £898; 1 ton 19 cwts. 3 qrs. 11 lbs. of black tin sold at £41 10s. per ton, and 6s. 7d. carriage, £83 0s. 3d.; tribute on tin ore sold 14s. 11d.; discount from merchants, £6 1s. 6d.; total receipts, £998 6s. 8d. Expenditure: By balance from last account, £17 13s. 1d.; labour costs (up to May 19), £639 19s. 5d.; merchants' and other bills, £223 15s. 7d.; bank cheque book, 8s. The expenditure totalled £881 16s. 1d., thus leaving a balance of cash at the bankers of £116 10s. 7d. There were no liabilities due and unpaid.

The accounts, having been printed and circulated, were taken as read.

The agents' report, signed by Captains CHARLES THOMAS and JOHN HARPER, was as follows:—

The 26 west on the Pink lode has been driven 9 fathoms since the last meeting, and is now suspended in order to communicate the rise above this level to the 20 west. We have risen 5 fathoms above the 26, the lode being of a very promising character, and yielding 22 lbs. of tin to the ton. The 26 east has been driven 15 fathoms since the last meeting. The lode here has much improved of late. It is fully 6 feet wide, and produces 20 lbs. of tin to the ton. This end is now about 30 fathoms short of the crosscourse, in the vicinity of which the other lodes of the district have always been very productive, and we have every reason to expect that the driving of the next 30 or 40 fathoms in the 26 east will open up productive ground. The 20 west has been driven 19 fathoms since the last meeting, and is now 3 fathoms short of the rise to which we hope to hole within a fortnight. This will greatly improve the ventilation of the western part of the mine. In the 26 crosscut north we have intersected the South House lode about 38 fathoms north of the Pink lode. The lode is 5 feet wide, and produces 36 lbs. of tin to the ton. We are much pleased with the character and general appearance of this lode. In the 6 or 7 fathoms before we met with the South House lode we drove through several branches, some of them yielding very rich stones of tin. In the neighbourhood of these branches the country is impregnated with tin. We have sampled several parcels of stuff from this point, and have found the produce to range from 10 to 36 lbs. of tin to the ton. The occurrence of these branches is of great importance, for they must fall in upon the Pink lode within 10 or 15 fathoms vertically below the 26, and it is reasonable to expect that they will exert a beneficial influence upon that lode. With regard to the future working of the mine, there are two or three courses which might be adopted. In the first place, the removal of the Turnavore engine to a centrally situated shaft might be accomplished; or, secondly, the Trevaunance shaft might be sunk on the Pink lode; or, thirdly, Wheal Gentle shaft might be sunk vertically by means of flat rods from Trevaunance engine. We have no doubt that ultimately the Turnavore engine must be removed. Seeing, however, that the shaft on which it would be placed is a considerable distance to the east of our present workings, and considering that we have already met with such very favourable indications at the 26 fathoms level in the Trevaunance part, and that the relative positions of the Pink and the South House lodes are now established, we recommend that steps be taken at once to sink Trevaunance shaft on the Pink lode. Meanwhile, we think, preparations should be commenced at an early date for the removal of the Turnavore engine. Seeing the considerable improvement now taking place in the mine and its undoubted prospects, there can, we think, be no doubt but that the property is a most valuable one.

The MANAGER (Captain Charles Thomas), in supplementing the report, said their opinion was that the property was a very valuable one. In the western end they had driven 9 fathoms since the last meeting, and previous to the last meeting they drove through some 6 or 7 fathoms of good tin ground. That had now pretty much gone down in the bottom of that level. They had had several crossings in the last 9 fathoms driving—some of them as much as a foot or 6 inches wide—which has invariably thrown the lode down, but when they had communicated with the 20 fathom level, and got the place ventilated, they would drive the 26 west. In the 26 east they had driven 15 fathoms since the last meeting; the lode had very much improved, and was fully 6 feet wide. (Applause.) It was a beautiful character lode, and was 30 fathoms from the crosscourse, where formerly large returns were made on the south lode. They were driving this end east as fast as possible, and he believed further discoveries would be made in that direction. (Applause.) The great point in the mine had been the driving of the 26 crosscut north. They drove 30 fathoms from the Pink lode, and intersected a branch or two, but not of much value. Then they intersected a richer branch, from which they sampled 5 tons, worth 37 lbs. of tin to the ton. (Applause.) They then drove 7 fathoms through branches yielding 10, 12, and 17 lbs. of tin to the ton, and during the last fortnight they had intersected what they had no doubt in the world was the South House lode. (Applause.) It was fully 5 feet wide, and samples had yielded 36 lbs. tin to the ton (Applause.) He thought that would speak for itself. The Pink lode was underlying 16 feet in the perpendicular fathom, and these branches would, after sinking, be continually falling on the lode. He had never known a similar case to fail, and he thought they might venture to speak strongly upon that. He had no hesitation in saying that as far as they could see, there was a certainty there. (Applause.) He should, therefore, advise them to get down and commence sinking Trevaunance shaft below the 14 fathom level as rapidly as possible, rising and sinking from the 26 to the 14. With fair speed in about four months they should have that communicated and the shaft brought down to the 26. (Applause.) He did not hesitate to say they had one of the finest prospects in the county. (Applause.)

The CHAIRMAN: Gentlemen, my task to-day is one of the easiest I ever had to perform in my life. I have not the slightest doubt in congratulating the shareholders on the most valuable property they possess. Every one who has any acquaintance at all with practical mining, will admit the reasonableness of everything which Captain Charles Thomas has just stated. (Applause.) The managers here are not accustomed to over-rate the prospects of this mine, and their valuations always prove to be correct. Gentlemen, I will now direct your attention to the statement of accounts which is before you. The tin we have sold has been raised from drivages, and Captain Thomas omitted to state that we had passed through a small section of tin ground—something like 6 or 7 fathoms—and we have not stoped away any of it. (Applause.) With regard to the payment of calls I wish to make an observation or two. There are no calls unpaid. (Applause.) Well, gentlemen, that is a very important and significant fact which you will admit when you recollect that we have spent on these two properties something like £30,000 already. (Applause.) As far as I can see the outside shareholders in Cornish mines are willing to put down any amount of money supposing there is a reasonable prospect of a fair return; and, secondly, supposing that the financial department is managed in accordance with strict business principles. (Hear, hear, and applause.) They say, and I think they are right, that they will have nothing to do with any Cornish mine on the Cost-book System where debts are allowed to accumulate. (Applause.) They say they will have nothing to do with any Cornish mine managed on the Cost-book System where calls in arrear are allowed—where persons are excused for not paying their calls promptly, and I think they are right. (Hear, hear.) A shareholder who does not promptly pay his calls does himself a very great injustice, but he does the company with which he is connected still greater injustice, and therefore, I think, gentlemen, that we have to congratulate ourselves that we have not one shareholder whose name we find on our books, who does not promptly pay his calls. (Applause.) We are in good company—(hear, hear)—and there is every guarantee that the financial management of this mine will continue to be as sound in the future as it has been in the past. (Applause.) To-day we find ourselves with £116 10s. 7d. in the bankers' hands, and we find that we do not owe a farthing to anybody in the world. (Applause). Now, that is well, and it satisfies me as a large shareholder and I am content to go on on those lines. We also find that if to-day we make provision by a 1s. call only for the next three month's working we shall at our next meeting be in as good a position as we are at this moment, supposing that in the meantime we do not raise any tin whatever. I am sanguine enough to believe that the return of tin to our credit next time will be important. (Applause.) We will take no heed of that in estimating our three-monthly outlay; we will prepare for a dead expenditure. Well, now with regard to the agents' report, you will see that they give us the impression that we shall have a very great mine here. (Applause.) And they point out the probable course of events which are likely to transpire. I think they are wise in doing that, but, at the same time, we shall make sure as we go. (Hear, hear.) I do not believe, and they do not believe, nor does any person connected with the management of this company believe, in questionable expenditure. What we say is, that at the right time we shall lay out a certain sum of money, and we shall make sure as we go. (Hear, hear.) The statement of accounts I must say is the result of very excellent book-keeping. It reflects credit on Mr. Harvey in London, and it also reflects credit on Mr. Hancock at St. Agnes. (Applause.) Mr. Hancock is one of the best accountants I ever met with in my life, and it is a pleasure to be associated with him in this connection. Gentlemen, I can only repeat I most heartily congratulate the shareholders in this company. There is a bright and brilliant future before us, and of that I have not the slightest doubt, and it will give me the greatest possible satisfaction to meet the shareholders from time to time, to prove to them the accuracy of the forecast with which we have been favoured. (Loud applause.) I have very much pleasure in moving the adoption of the statement of accounts and the agents' report. (Applause.)

Mr. W. H. P. MARTIN, J.P., in seconding the motion, said he agreed with their respected Chairman that they could congratulate themselves on the very satisfactory and promising report presented to them that day. They all knew that Captain C. Thomas was not in the habit of making a statement simply for the purpose of making it, and for the purpose of pleasing people because they were interested in the property. (Hear, hear.) They could always rely on their manager's statements being true, *bona fide*, and straightforward, and in having such a man in charge of the mine, the faith of the shareholders in the concern was increased, (Applause.) The business of a mine could not be better conducted than was the business of Polberro in Mr. Reynolds's office, and they well knew no one could surpass their Chairman in making a speech on mining matters. (Applause.) The shareholders ought to be exceedingly pleased with the prospect before them. People in the district were agreed that the future prospect of the concern could not fail to be satisfactory, not only for the adventurers, but for the district at large, and especially that of St. Agnes. (Applause.)

Mr. F. W. MICHELL called the attention of the shareholders to the very great similarity there was at the present moment in the South House lode dropping down on the Pink lode in Polberro, and the Wheal Rock lode dropping down upon West Kitty lode. He thought the circumstances were very similar to each other, so much so that they could hardly be classed otherwise than following in the same category, and producing the same result. The dropping down of the Wheal Rock lode on the West Kitty lode produced the richest tinstuff they ever had in West Kitty, and their best work at the stope at the 72, from which a £1 dividends was paid, came from just underneath where that junction took place. It seemed to him they were approaching a similar thing in Polberro, and he should not be at all surprised if the junction there did not produce equally as good results. (Hear, hear.)

Mr. BAWDEN said there was a most important item in connection with the accounts. He would not presume to say anything as to the mining prospects; in that respect he relied on their excellent friend Captain Thomas, but he was at home on questions of account, and he did think it would be well if they put on record their opinion as to the excellent way in which they are kept. He thought it was a very important fact when in a mine where there were 18,000 shares they found there was not a single defaulter in the payment of calls—that was something altogether unique in the history of Cornish mining. (Applause.) That was an example that might be well copied by other mines in the county. (Hear, hear.) Such a body of shareholders deserved success, and he felt the time would come when the calls they had made, and a handsome amount added to them would be returned. (Applause.)

Mr. I. ROUSE said as a shareholder residing on the spot he was well satisfied everyone was doing their best, and all the shareholders in the neighbourhood were satisfied at what was being done. (Applause.)

Captain JOHN HARPER (the resident agent) said at their last meeting he expressed a hope that they would have a great improvement during the coming quarter, and that hope had been fulfilled. (Applause.) For 20 fathoms in the cross cut they had driven through good branches, and in the last 7 fathoms they had had some really good tin ground. Meeting with the South House lode, which was something like 5 feet wide, he considered was a very important point, and something good ought to be discovered at the junction. They had on that junction something like 100 fathoms that had never been seen. In the eastern ground they had driven as much as 20 fathoms through mundic, varying from 4 to 6 feet in width, and generally a harvest followed such mundic. The lode in that part of the mine had lately undergone a change, and at the present time was looking more kindly. He thought there was a fine prospect there, and that they were entering into a run of tin ground. (Applause,) Westward the lode had been disturbed ever since their last meeting by small gossans. In the end at the present time they had got a gossan over a foot thick, and probably the lode had dropped down a bit. Looking at the indications and prospects he believed the time was not far distant when they would have a mine equal to anything in the county. (Applause.)

Mr. G. C. HANCOCK, C.C., remarked that it might be interesting to the shareholders to know that at a comparatively shallow depth—at the adit level—in the days gone by—enormous quantities of tin were sold by Polberro. In February, 1850, no less than 50 tons were sold, and he had got several 60's, as well as 33, 55, and 53 month after month. He got these figures from an old dues book, which unmistakeably showed by the items contained in it that immense quantities of tin had been found from the surface down to adit. Under these circumstances it occurred to him that they were almost sure to find tin in the level driven east below where all this tin was discovered. (Hear, hear.) His opinion was, and always had been, and he had stated it over and over again, that at the junction of the Pink lode with the South House lode and Chappell's downright lode immense quantities of tin would be found. (Applause.) He believed every one in the district who had money to speculate would gladly speculate to see that junction effected. They did not call it speculation, but considered it was an absolute certainty that tin would be found there in large quantities. (Applause.)

Mr. HUGH P. VIVIAN said it was the first time he had attended Polberro meeting, and he was ignorant of the lodes and their bearings. Mr. Hancock had said something about a downright lode.

Mr. HANCOCK: Yes, Chappell's downright.

Mr. VIVIAN said that made a junction of three lodes. They all knew that the junction of lodes always proved to be beneficial to the mine in which they occurred. He did not remember a single instance to the contrary. (Hear, hear.) They all knew that the junction of the main lode in Dolcoath gave a fine lode, and these junctions were very important affairs indeed. He saw their pumping engine was doing about two strokes a minute; he supposed it could do a deal more than that, and that it was capable of coping with the work they intended to carry out.

Mr. F. W. MICHELL, engineer to the company, said the engine at the present moment was not working at more than one-sixth of its power—(hear, hear)—and, he believed, less than that. There was ample margin for dealing with the increased water they would have to contend with.

Mr. HANCOCK: The engine is one of the best in the county.

The CHAIRMAN remarked that the agents of West Kitty were on the committee of management, and he should like to hear a few words from them.

Captain WILLIAMS (West Kitty Agent), said he could endorse all Captain Harper had stated. Captain Hooper and himself went underground at Polberro on Saturday, and they were very much pleased with Chappell's downright lode, and also with the South House lode intersected in the north crosscut. There was a lode in the crosscut about 5 or 6 feet wide, and the stone of tin he had in his hand he broke from one side of the crosscut. It was a very good lode, and one which in past times turned out immense quantities of tin at and above the adit level right above the 26 crosscut. There was a decided improvement in the 26 end east to what it was three or four months ago. The appearance of the lode there had very much improved. The sinking of the shaft was a splendid speculation. (Hear, hear.) Polberro was undoubtedly a good property—one of the best in the county. (Applause.) He thoroughly endorsed the proposal to sink the shaft on the course of the lode. (Applause.)

Captain HOOPER (West Kitty Agent), said he broke tin from the eastern side of the crosscut. With regard to the eastern end being in mundic for several fathoms he might mention that when they cut the lode at West Kitty it was full of mundic and almost worthless for tin. After driving for some time the mundic changed, and the lode made tin. He had no doubt now they were cutting down the shaft, and driving in this eastern end they would have a very rich course of tin. (Applause.)

The motion was then put and carried unanimously.

Mr. I. ROUSE proposed that to meet the requirements of the company for the next three months a call of 1s. per share be made, payable on or before Monday, June 25.

Captain MORCOM, in seconding, said he had always held a very high opinion of this part of St. Agnes as a mining property, and he always found fault with the old company for dropping the working of the concern. Their finances were most satisfactorily kept, and they knew how and where the money had been spent. What they wanted was a better price for tin. (Hear, hear.) He did not know that the work had progressed so rapidly as it might have done. With regard to sinking the shaft he should be glad if they could use a compressor and rock drill in order to accomplish the work with greater rapidity.

The CHAIRMAN remarked that the shaft would be sunk with the greatest possible rapidity. If it could be done faster with a rock drill they would put one in.

Mr. S. PAYNE complimented the agents on the accurate working out of the last call, and said in Polberro they had an advantage over a good many mines, because, in addition to their own two agents, those connected with West Kitty were on the committee, so that really they had the counsel and guidance of four practical mining men. (Hear, hear.) He was exceedingly pleased at the prospect before them; every time they met, their prospects grew brighter and better, and he had no doubt that in the next four months something would turn up to help them on. (Applause.) He was sure they were on the high road to prosperity and success. (Applause.)

The motion was unanimously carried.

Mr. BAWDEN proposed "That the best thanks of this meeting be and are hereby presented to the committee of audit and finance for their past services, and that the following do constitute such committee till the next general meeting of the company—the Hon. Ashley Ponsonby; Messrs. A. Strauss; W. H. P. Martin, J.P.; S. Payne; G. Coulter Hancock, C.C.; F. W. Michell; Captains Charles Thomas, John Harper, Joel Hooper, and John Williams."

Mr. N. B. BULLEN, in seconding the motion, said the heartiest thanks of the adventurers were due to the committee for their services in the past. (Applause.) The financial statement presented to them that morning was a thoroughly sound and excellent one—(hear, hear)—and he was sure that the whole financial system in connection with Polberro was one highly to be commended. The members of the committee did their duty especially well. A very gratifying feature was the extreme confidence they had in Captains Thomas and Harper. Another pleasing fact was that the whole of St. Agnes district was looking so well. (Hear, hear.) At Blue Hills, they had a lode worth £50 a fathom. (Mr. HANCOCK interposing: And on Polberro lode.) Wheal Kitty was looking extremely well, and they knew West Kitty always looked well. (Hear, hear, and applause.) If they could only get a better price for tin the calls would be turned into dividends, and he felt convinced that when America put her house in order, they would probably have a substantial rise in tin. (Applause.)

The motion was unanimously carried.

The CHAIRMAN said he must inform them with regard to the 40 forfeited shares which were forfeited a long time ago, the committee had not yet sold those shares, and inasmuch as they could not get more than 27s. a share at the present moment they did not think it would be wise to sell them. When shares got to £3 or £4 perhaps they might be able to consider the question of selling.

Mr. REYNOLDS then moved a vote of thanks to the agents and Mr. Hancock for their valuable services, and assured the shareholders it was a great pleasure to him to be associated with such gentlemen. (Applause.)

Mr. MARTIN seconded the motion, and remarked that having such men at the head of affairs increased the confidence of the public in the mine. (Hear, hear.)

The motion having been carried, Captain C. THOMAS said they all worked exceedingly amicably together. They discussed with Mr. Hancock the points in the mine, and were always agreed on the line of action to be taken.

Mr BAWDEN proposed a vote of thanks to the Chairman, and Mr. HANCOCK, in seconding, said were it not for Mr. Reynolds every mine in the parish of St. Agnes would have ceased to work by now. It was when things were down, when West Kitty and Wheal Kitty were dying, and the other mines were at death's door, that Mr. Reynolds stepped in, and had it not been for that action on the part of their Chairman the parish of St. Agnes would have been in a very bad state at the present moment. (Applause.) They were deeply indebted to him for what he had done for the parish. (Applause.)

The motion having been carried with acclamation, the Chairman briefly replied, and the business of the meeting concluded.

DRAKEWALLS MINING COMPANY (LIMITED).—The ordinary general meeting of the Drakewalls Mining Company (Limited) was held on Thursday at Winchester House, Mr. G. Stewart Anderson presiding.—The Chairman said he regretted there was a very heavy balance of debt, which had occurred during a series of years. The directors' mandate from the shareholders was to sink the mine, and that work had been carried on steadily for a considerable time, but the dangerous condition of the shaft had necessitated an expenditure of some £4000 or £5000, and in addition to that, the drought of last year was so severe that they had not sufficient water for the boilers, so that the pumping had to be stopped. They had 12 stamps which could be got into working order within a week, if necessary, and a further 16 stamps could be repaired within a short time if they could find plenty of tin. The Chairman then proceeded to give details of the work that had been done, and of the yield of the ore, which he regarded as satisfactory, and he said he looked forward with considerable confidence to still better results. He concluded by moving the adoption of the report.—The motion having been duly seconded, Mr. Geere, who said it appeared that the company took over a white elephant when it became possessed of this property, urged that the working of the mine should be stopped at once, so that no more calls on the shareholders need be made.—Mr. Sloper suggested that one or two shareholders might be appointed as a committee to confer with the directors as to the future plan of operations.—After further discussion the report and accounts were unanimously adopted.

AT the adjourned meeting of the Simmer and Jack, called for the purpose of increasing the capital of the company, it was resolved that, in view of a certain offer received by the company from the Consolidated Gold Fields of South Africa, shortly to be submitted to the shareholders, it was not advisable to proceed with the scheme for the increase of the capital and issue of shares upon the terms contained in the notice convening the meeting.

THE MONTANA MINING COMPANY.

The recent important discovery.—Profits for current months.

The third ordinary general meeting of the shareholders of the Montana Mining Company (Limited) was held on Thursday, at Winchester House, the chair being occupied by the Managing Director, Mr. THOMAS PHILLPOTTS.

The SECRETARY (Mr. Charles J. Cooke) read the notice convening the meeting.

The CHAIRMAN: I presume, gentlemen, that as you have each had a copy of our report it is your wish that the same may be taken as read. Referring to the balance sheet which accompanied our report, you will have noticed that the loss shown for the half-year under review amounts to £757, and although this is not as satisfactory a result as we could have desired, it will nevertheless bear a favourable comparison with the loss of £19,243 sustained during the previous six months. No doubt much of this difference may be accounted for by the abnormal expenditure attendant upon the heavy lawsuit in which we were involved last year, and although we must be prepared to incur some further expense in the litigation still pending, the marked improvement in the monthly returns during the current year leads us to confidently expect that we shall be able to meet any such further legal expense out of revenue, without trenching upon our capital, or making a call; and when our accounts are made up for the current half-year they will, we believe, show a substantial profit instead of a loss. During the last six months the results of our operations at the mine confirm this view. The gross assay coinage value of the ore treated in the mills has averaged $9·98 per ton, as against $7·27 per ton during the previous half-year, and if we take the net average value realised, we find that it is $7·89, as against $5·76 of the previous six months, showing a net gain of $2.13 per ton—a result due entirely to the vigour with which our development work has been carried on. The depreciation in the value of silver continues to affect us severely. This depreciation is, as you all know, a topic of absorbing interest throughout the mercantile world. Statesmen and financiers may, or may not, be able to devise some scheme by which this perplexing question shall be satisfactorily settled, but until this feat is accomplished we can only take the market rate for silver as indicating the intrinsic value of that metal. I will merely call your attention to two facts; our gross output of silver during the past half-year represented about 38 per cent. of our production, and the average price of silver in the United States receded to about 55 per cent. of the standard or coinage value. The only other item in the accounts which seems to call for comment is the charge of $46,354 for prospecting, showing an increase of $17,770, or about £3700 over the preceding six months, but you must bear in mind that the improvement in the milling value of our ore is largely, if not entirely, due to this expenditure. As regards other expenses, we have reduced them as much as possible—consistent with efficiency, and I can assure you that the most rigid economy is observed in every department. As Mr. Bayliss was detained in Montana longer than he anticipated, in consequence of the pending lawsuit with the St. Louis Company, which was set down for hearing during the April term, we thought it would be more satisfactory to our shareholders if the usual half-yearly meeting was postponed for a few weeks until he could be present. Mr. Bayliss only arrived in England about 10 days ago, when we immediately issued the notice calling this meeting, and I hope you will accept this explanation, and consider it to be a good and valid reason for our not having called you together at an earlier date. The diagrams on the walls will enable you to follow Mr. Bayliss's description of the recent discoveries and developments made in the mine. He will presently give you some interesting information on these and other matters relating to your property in that lucid and admirable style with which you are so familiar, and I venture to predict that his address will be as gratifying to the most critical, as it will be reassuring to the most despondent shareholder. I now beg to move "That the report of the directors and the accounts as presented be received and adopted."

Mr. RAWLINSON T. BAYLISS, in seconding the resolution, said it was always a pleasure to him to meet the shareholders of the company, and he felt a greater satisfaction upon that occasion than ever before, seeing that, although, as the Chairman had said, they had again to record a loss upon the operations for the last completed half-year, the loss only amounted to £757, an amount which might be termed insignificant when compared with the ruinous loss of £19,243 incurred in the operations for the preceding half-year. This feeling of satisfaction was not, however, wholly based upon the reduction of the loss, but upon the knowledge that the improvement shown in the operations of the past half-year had been fully maintained, that the operations for the current half-year showed a considerable profit, and that the present condition and appearance of the mine warranted the declaration that the profits would not only continue and increase, but would be of a substantial amount. (Applause.) He wished in a few words to explain the policy the directors had thought fit to pursue during the current half-year. The discovery of the new Castletown lode placed them in the possession of an orebody of great extent and value, for the treatment of which it would have been possible to increase the production to an extent which would have enabled them to have declared a dividend. Such a result, however, could not have been attained without an excessive extraction of ore, and a curtailment of the development work upon which the success of the mine entirely depended. Tempting to the directors as was the prospect of declaring a dividend, they felt it would have been highly imprudent, having regard to the future permanent success of the mine, so to have anticipated the future. It was, therefore, decided to restrict the production, during the present half-year, to a moderate amount, and to expend a large portion of the surplus earnings upon a vigorous development of the mine, in the expectation that further discoveries would strengthen the position of the company, and justify them in hoping for dividends in the future, maintained with regularity. Speaking with 10 years experience of the conservative principles which had always actuated the shareholders of that company as a body, he felt sure the policy adopted would commend itself to the meeting, particularly when he told them that the results of the development to date had fully equalled their expectations. Notwithstanding the large amount of money they were now spending on development work—which was larger than they had ever expended before in a similar way—they were able for the first time within three years to make remittances from the mine to London, equal in amount to about $40,000. (Applause.) Mr. Bayliss then proceeded to describe in detail the various works which had been carried on in the mine, illustrating his remarks by frequent references to large plans suspended from the walls. Alluding first to the discovery of the new Castletown lode, the speaker said it was the most important discovery which had been made for a period of five years, if not in the whole of the history of the mine. (Applause.) Not only was its intrinsic value very great, but it vastly aided them to a clear understanding of the complicated vein system, of which the Drumlummon lode was the central figure. In addition to clearing up several matters which had hitherto been somewhat obscure, it assisted them in rightfully directing the exploratory works proceeding in other portions of the property. They would see from the plans that, although the discovery of the new Castletown lode was only made in December last, the time since elapsed had been fully utilised, for the workings there covered a distance of over 2500 lineal feet. (Applause.) He might, in passing, mention that the Castletown lode above the No. 2 level and the new Castletown lode below that level were believed to be one and the same vein, and the Castletown lode, hitherto worked below the No. 2 level, was merely a branch, or limb, of the main Castletown vein, which dropped away from that lode close to the No. 2 level. After the discovery of the Castletown lode in the Cruse level cross cuts were run at each succeeding level below to intersect that vein in depth, and in each case this branch, or limb, was encountered, and from its appearance it was assumed to be the Castletown vein. Work prosecuted in No. 2 level in September last suggested the idea that the lode previously encountered below the No. 2 level was not, in fact, the main lode, but was a fissure departing therefrom in depth, and that the main Castletown lode would still be above to the east. Careful surveys of the work led to the opinion that if the theory was correct, the Castletown lode would be found about 70 feet to the east of the Castletown workings in the No. 3 level. The crosscut was accordingly driven, and at 65 feet from the old Castletown workings the new Castletown ore body was encountered, and at the point of intersection it was 14 feet wide, and had an average value of $50 per ton. (Applause.) It was to the probable result of this working that he referred when he had last addressed them, and the magnitude and importance of the new discovery was far in excess of what he had ventured to anticipate. (Applause.) Following its discovery in the No. 3 level, the new Castletown lode was developed in each succeeding level down to the 800 level, which was the lowest point reached upon the new Castletown lode. The development of the lower levels was practically the same as that of the No. 3 level, with the gratifying exception that the average grade of the one in the lower levels was higher than in the third and fourth. As to the general average value of the ore in the new discovery in his half-yearly report, embodied in the directors' report, he had given the results of several tests made, with the object of determining the value of the ore, which proved to be $20 per ton. Since then there had been several changes—all in the nature of improvement. The average value of the ore now extracted from the new discovery was estimated at $30 per ton. He thought he had said enough to show that the new discovery was of importance—in fact, it had given them what was in reality a new mine. Passing on to refer to the Drumlummon and Nine Hour lodes, the speaker said the most recent development at these points had been highly satisfactory, having yielded a considerable tonnage of ore, and promises of a very large tonnage for the future. As to the prospects of the mine, he thought, as business men, they would require some confirmation of the expression of confidence he had made at the commencement of his speech, and, with the object of furnishing it, he would quote to them some figures. For the half-year ending June 30th, 1893, the average net value of the ore per ton was $5·77, while the average value of that treated during the last half-year of 1893 was $7·89 per ton. The loss for the half-year had also been reduced to $757, showing that, notwithstanding the heavy expenditure on prospecting work, profit would accrue on the ore treated of an average value of $8 per ton or thereabouts. For the expired months of the current half-year the average net value of the ore treated had been $10·03, so that it had become a matter of certainty that the revenue account for the current half-year would show a considerable profit, notwithstanding an expenditure of about £15,000 on development and the repair of No. 1 shaft during the six months. The speaker then proceeded to compare at some length the present position of the property to that of several years ago, remarking that here lay the justification of the confidence he had expressed in the future of the company. Speaking for those associated with him in the management of the mine as well as for himself, he thought they might, without any want of modesty, entertain some pardonable pride at the results which they had achieved. Mr. Bayliss concluded by seconding the resolution moved by the CHAIRMAN.

The resolution was then put and carried without discussion.

The retiring directors, Mr. John Darlington and Mr. F. P. Crowther, were then re-elected.

Mr. REID moved the re-election of the auditors, Messrs. Jackson, Pixley, Browning, Husey, and Co., and Mr. Bayliss, in seconding a vote of thanks to the staff, referred to a remark made at a recent meeting as to the severance of Mr. Henley's connection with the company, explaining that that gentleman had resigned his position to take the management of another mining company, and had given ample notice of his intention to do so.

The proceedings terminated with votes of thanks to Mr. Bayliss and the Chairman.

MINES TRUST.

Amalgamation with the South African Gold Trust decided upon.

An extraordinary general meeting of the shareholders in the Mines Trust (Limited), was held on Tuesday, at Winchester House, under the presidency of Mr. PERCY TARBUTT, for the purpose of passing certain resolutions providing for the amalgamation of the company with the South African Gold Trust (Limited).

The MANAGER (Mr. F. E. Lander) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, your directors are sorry that they have had to postpone the date of the general meeting for so long; but the proposition that was mooted between this company and the Gold Trust was of such importance that we felt it would be foolish to call you together a month or six weeks ago, and then call you together again to-day to consider this proposition, which we, of course, could not enter into without first submitting to you. The details of the proposition are given in the last paragraph of the report. There you will see that the Gold Trust proposes to acquire the whole of our assets and to take over the whole of our liabilities for 42,637 fully-paid £1 shares and £10,659 5s. in cash. The agreement in detail will be read to you presently by the solicitor of the company, but before calling on him to do so I should like to explain one point which is referred to in this paragraph. You have already seen it; but perhaps I can make it a little more clear to you. It is that included in the assets—there are £7739 3s. 3d. of debts due to this company. These debts have come about in our ordinary loaning business, for which we were formed, and are the only ones—I think there are four of them—on which we had to foreclose on the securities deposited with us. We think we are fully secured; but, like all these things, when they come into your hands you must nurse them a little before you can realise the full amount. Therefore, the Gold Trust prefers that we should let the liquidator of this company hold these assets in order that he might realise subsequently, and the net amount it has to pay us is, therefore, the same number of shares—42,637—and £2920 in cash. That, together with the £7739 3s. 3d. (the amount of the debts), makes up a total amount of £10,659 5s. in cash, which is the basis of the agreement. I now call on the solicitor of the company to read to you the agreement, or to give you a synopsis of it, whichever you prefer, and then I can make a few remarks on the proposition generally before submitting it to you.

The SOLICITOR to the company then read the heads of the agreement.

The CHAIRMAN, continuing, said before submitting this I should like to give you the reasons why we thought it to be of sufficient importance to bring before the shareholders. You will remember that this company was formed, first of all, with the object of loaning money on the Stock Exchange from account to account on mining securities; and, secondly, with the object of investing in mining adventures in different parts of the world, so as to average the risks which are always attendant on mining investments. The loaning business, when you get it, is an excellent one, and pays very good rates indeed; but, unfortunately, there are periods of depression, in which there is no speculation in the mining market, and the business drops to so small an amount that it could not possibly support a company with the charges of administration that we have. We have, therefore, drifted very considerably into investments, and there are several of the directors who are intimately connected with some of the large companies of South Africa. Naturally enough our investments have gone there also. While, however, we have made very considerable profits out of these investments, we are very much handicapped in competing with other companies, in that we have no organisation whatever in South Africa. We have been dependent on such business as could be obtained by personal influence on the part of the different members of the board. If you agree to the proposed amalgamation you will really be transferring your interests and those of the company into the South African Gold Trust, which, through its close association with the Consolidated Gold Fields, has the command of, I suppose, the most perfect organisation in South Africa. Another reason is that the cost of the administration of this company is, and must be, very large as compared with the gross profits. You have a tolerably representative board of directors, you are obliged to keep up a good office for the Stock Exchange business we have to do, and we are obliged to have a responsible manager, who must be well paid. If we accept the proposition made to us, the extra cost entailed on the Gold Trust in administering the affairs of this company when absorbed in it will be, comparatively, a very small thing indeed. There is only one other thing, I think, I have to explain, and that is the basis upon which the figures of the terms proposed in the agreement were arrived at. The whole of the assets of the Gold Trust were scheduled and submitted to two independent directors of this company (Lord Gifford and Mr. H. W. Harris) for valuation; our assets were scheduled, and were submitted to two independent directors of the Gold Trust (Mr. Hamilton and Mr. Nixon) for valuation. There were certain differences in the estimates, and these were gone through, and ultimately the basis which has been submitted to you was settled, and, being intimately acquainted with the assets of both companies, I think it is as good and as fair and equitable a basis as could possibly be arrived at. Therefore, I think the only question you have to consider is whether you prefer to carry on this company as an independent concern, or to merge it in a larger undertaking with a better organisation. Before I invite you to ask questions, I will move formally the first resolution: "That it is expedient to effect an amalgamation of this company with the South African Gold Trust (Limited), and that, with a view thereto, this company be wound up voluntarily."

Mr. H. W. J. HARRIS seconded the motion.

The CHAIRMAN, in answer to questions, said that the shareholders in the Mines Trust would receive one share in the Gold Trust for every two held in the Mines Trust, an immediate distribution of practically 3 per cent., and a final distribution, when the assets of £7700 odd left with the liquidator were realised, of about another 8 per cent. in cash. The Gold Trust had been reconstructed, and, of course, they would get the new and not the old shares, the new shares being worth more than the old ones.

The motion was then put and unanimously carried.

The CHAIRMAN then moved a resolution approving the draft agreement submitted to the meeting, which was seconded by Lord GIFFORD, and carried without dissent.

The ordinary general meeting of the company was then held, when the CHAIRMAN moved, in one sentence, a resolution approving the directors' report, which was carried unanimously, and the proceedings terminated.

STRAITS DEVELOPMENT COMPANY, LIMITED.

Reconstruction happily completed.—A promising concern.

The first general statutory meeting of the Straits Development Company (Limited) was held at the Cannon-street Hotel, on Tuesday, the chair being occupied by Colonel ENGLEDUE.

The SECRETARY (Mr. A. F. Austin) read the notice convening the meeting.

The CHAIRMAN explained that the meeting was a formal one, held in conformity with the Act of Parliament, but it afforded an opportunity for the directors to lay before the shareholders the particulars relating to the reconstruction of the old company, and the successful formation of the Straits Development Company. In the absence of the Chairman, who was looking after the company's interests in Singapore, he had been deputed to make a brief statement as to the present position of affairs. The company was registered on February 14, 1894, and on March 21, 166,667 shares, representing a subscribed capital of £25,000, were allotted. These shares, which were credited with 17s. paid, were secured principally by the old shareholders, since when, at the request of the liquidators, 17,625 shares had also been allotted, chiefly to the original holders, so that at the present date 184,292 shares were actually taken and held by 501 shareholders. There remained 18,373 shares, which the liquidators and directors had practically arranged to place, so that the board had now had to refuse applications. (Applause.) When all these shares had been allotted the available working capital of the company would be £30,399. (Applause.) In addition to this there were 17,335 shares originally reserved by the old company for railway purposes, which could be issued at some future time, upon which there was a full liability of £1 per share. The new company would, of course, take over the whole of the assets of the old one, including a valuable saw-mill, wharves, steamers and barges, which originally cost fully £23,300. Beyond this, there were concessions which extended over an estimated area of 6000 square miles, or 3,840,000 acres, handed over to the new company. Considering the value of all these assets and the amount of deadwork done, there could hardly be any doubt that there was a sufficiency of working capital to ensure the success of the undertaking. When the company was first formed, in 1889, there was a working capital of £70,000 subscribed, the bulk of which was remitted to the East at rates which had since changed to such an extent that native products could not be bought for £100 sterling, which then would have cost £175. There would probably be some delay in exporting the timber from the East, seeing that it might be deemed advisable to remove the saw-mill to Singapore. It was proposed to have the timber cut by contract with the natives and then sent to the mills, for, in their opinion, the system of making contracts with the natives, and paying them by results, was the only promising one. With a view to carrying out these operations, they had already engaged the services of a competent engineer who thoroughly understood Chinese and Malay labour and methods. The board were fully aware of the valuable mineral concessions belonging to the company. It was intended to organise several prospecting expeditions to continue the work of exploration for minerals. At present the directors did not propose to embark in any mining operations; but to seek to foster the formation of subsidiary companies to work the gold and tin known to exist and being profitably operated in the immediate neighbourhood of the company's property. In conclusion the Chairman expressed the earnest desire of the board to see the undertaking carried to a successful issue, and assured the shareholders that nothing which could possibly assist this should be left undone. (Applause.)

Subsequently an extraordinary general meeting of the company was held for the purpose of considering the advisability of making certain alterations in the Articles of Association to meet the requirements of the Committee of the Stock Exchange, and to enable the company to obtain an official quotation for its shares.

The notice convening the meeting having been taken as read,

Dr. CLARK moved the resolutions embodying the alterations as follows:—

> That Article 32 of the Articles of Association of the company be altered by striking out the words "or shares upon which the company has a lien."
>
> That Article 140 of the Articles of Association of the company be supplemented by "a copy of such balance-sheet and report shall be sent to each member entitled to the same seven days previous to the ordinary meeting."

These resolutions having been formally seconded and carried, the proceedings terminated with a hearty vote of thanks to the board of directors, several of the shareholders expressing their confidence in the future of the undertaking.

THE Koneman process of ore reduction in operation at the Chicago-Cripple Creek reduction works is credited with having caused much interest among Colorado mining men and to revolutionise the method of treating refractory ores.

FRASER AND CHALMERS.

The success of an English work.—A fresh creation of capital.

The ordinary general meeting of Fraser and Chalmers (Limited) was held yesterday at Winchester House, the chair being occupied by Mr. JULIUS CHARLES WERNHER.

The SECRETARY (Mr. Walter McDermott) read the notice convening the meeting.

The CHAIRMAN said; Gentlemen, you have all, I think, had the report before you for some time, and, with your permission, I will take it as read. The result of the last years operations has, unfortunately, not been such as would enable us to declare a dividend. As you know, we derive our principal income from the American Corporation, and during the last year things in America have been so very bad that, in spite of every effort on our part and on the part of the American management, we have not been able to earn sufficiently to pay a dividend. Still the result of the American company, despite the very bad times, has been decidedly better than that of the previous year. In the year 1892 the net profit of manufacture, after providing for all expenses and charging all outlay, was only $94,000, against $177,292 in the past year. Unfortunately, against this sum we had to write off bad debts and depreciation on investments, $56,000, so that the balance carried forward, after paying the interest on the debenture bonds, amounts to $21,286, against $3606. I may state that this improved result has not been brought about by a better state of business, but we have succeeded in cutting down expenditure to what I believe now is the lowest possible point. It is only fair to give praise where it is due, and to say that the management in America have used every effort to bring about this result—especially the managing director, Mr. William Chalmers, who has cut down the expenses all round, beginning with his own salary which has been considerably reduced. Few people, except those who have been in very close touch with America, have any idea of what the recent crisis really was. Every ordinary business facility failed. In fact, so far as the circles with which we are dealing are concerned, there was almost a complete suspension of payment. The banks afforded no facility at all; in fact, money could not be got at any price. Consequently we got very short of working capital. I am sorry to say the crisis has not yet entirely gone. We have got past the acute into the languid stage, and business in America is very slack. Prospects there for this year are certainly not very good. There are a fairly large number of good orders on hand, but we are not yet fully occupied, and I am afraid it will be some time before we get back to the ordinary state of affairs. There is, however, to my mind, every hope that, in future years, we may see a return of the prosperity formerly enjoyed. Turning now to the English works, I think they have fully justified the hopes formed respecting them. Last year at the annual meeting one of the shareholders asked what justification we had for the erection of these works. We then expressed the assurance that there was full justification for going on with the building of these works, and I believe the results of the first year have fully borne out that view. Of course, the first year is no guide for the future. Everything has to be established and organised. Personally, I should have been satisfied with almost any profit, but I think you will agree that the profit made—nearly £12,000—on the manufacture and sales is not at all a bad one to begin with, and it does not require much boldness on my part to say that this year there will be a considerable advance. It should be remembered that at the commencement of the year some of the works were not completed, and only got into full operation in May. Our prospects here are very good, and we are glad to have built these works, and only regret they were not ready a year ago. At one time we were placed in an awkward position by the rather sudden resignation of our managing director,' Mr. Fraser. He left us quite upon the terms of his contract—his time had quite run—but we were in hopes that while we were in so difficult a position he would have stayed with us a little longer. However, he left us, and has not bothered much about us since. We were fortunate enough to secure the services of Mr. Seymour. He did not come as a stranger amongst us—many of us had known him before. He had been chief engineer of the De Beers Company in Kimberley, where he had reorganised the whole of their works, so that we could judge' him not only by reputation, but also by results. Moreover, he not only enjoys the confidence of his colleagues, but also that of our clients in South Africa, and I think the company may congratulate itself upon the acquisition it has made. The Chairman concluded by moving the adoption of the report and accounts.

Mr. HAMILTON SMITH seconded the motion, which was carried *nem con.*

Mr. W. J. Chalmers, the retiring director, was re-elected his colleague, Mr. Thomas Chalmers, not seeking re-election,

The auditors, Messrs. Deloitte, Dever, Griffiths and Co., were also re-appointed.

The CHAIRMAN then moved the following special resolutions:—

1. That the present capital of the company be reduced from £525,000 divided into 105,000 shares of £5 each to £315,000 divided into 105,000 shares of £3 each, and that such reduction be effected by cancelling to the extent of £2 per share the amount paid up in respect of each of the said 105,000 shares which have been issued, as being capital which has been lost or is unrepresented by available assets.

2. That the capital of the company be increased by the creation of 21,000 new shares of £3 each, to be called "Preference Shares," to which there shall be attached the special rights and privileges following, that is to say:—

(1) The holders of such shares shall be entitled to a fixed cumulative preferential dividend at the rate of £7 10s. per cent. per annum on the capital for the time being paid up on such shares respectively.

(2) Whenever the profits of the company in respect of any calendar year shall be more than sufficient to pay the preferential dividend aforesaid to the close of such year and also a dividend for such year at the rate of £7 10s. per cent. per annum on the capital paid up on the ordinary shares, the holders of the preference shares aforesaid shall be entitled to participate in any further dividend that may be paid for such year *pari passu* with the holders of the other shares in proportion to the capital paid up thereon.

(3) The capital paid up on the preference shares aforesaid shall not be liable to cancellation or reduction in respect of loss or depreciation.

(4) In the event of the winding up of the company, the holders of the said preference shares shall have a preferential right as regards repayment of capital and otherwise as hereinafter mentioned, and accordingly shall be entitled to have the surplus assets applied, first, in paying off the capital paid up on the preference shares held by them respectively, and secondly, in paying off the arrears (if any) of the preferential dividend aforesaid to the commencement of the winding up before any return or payment of capital is made to the holders of the other shares.

(5) The preference shares aforesaid shall be issued to such persons and on such terms and conditions as the directors may think fit.

The CHAIRMAN said: Gentlemen, as I have stated at former meetings, we have never been in a position to do what every well-conducted company should do—viz., write down our properties at a certain reasonable figure every year. Besides having these assets on our books at almost their original cost, one of the largest items in the total of the American assets is the goodwill. This goodwill stands on our books at something like £160,000. In making up the American accounts, and preparing them for this meeting, we had to discuss very seriously the position of the company, as we have done at all times, and our solicitor very rightly pointed out that we could hardly present to you these accounts as if they were absolutely correct with every figure represented by actual, real value. Well, we could not present you such a balance sheet, and, therefore, you find a note with the accounts inviting you to deal with the question of depreciation of your property. We think that we should write off from the present ordinary share capital £210,000, that is to say that we should reduce the face value of our shares from £5 to £3. The justification for that is that we should write down all the buildings and properties in America—not, perhaps, to what they are actually worth. Then there is the goodwill; as we have not paid a dividend for two years, we cannot allow it to stand on the books at the old figure. We therefore propose to write this down, and in future one of our assets in England representing the $1,500,000 for the American share capital, will only represent in our books $500,000. In the meantime we have to provide for Erith. We have our contracts to fulfil, and in order to finance the company up to this point we had to contract a loan of £25,000, which we could only secure by the guarantee of the directors. We, therefore, wish to create new capital, and in order to make this new capital attractive we propose a further reduction of the ordinary capital. In the first instance, we hope the ordinary shareholders will subscribe *pro rata* for the new share capital. In that case their actual holding in the company would remain unaltered. There is little doubt, however, that some of it will remain unapplied for, and we shall have to find other people to take these amounts. Of course it does not matter what the face value of the ordinary share capital is. What we care about is the market value of the shares. The only alternative to this proposal, which has been brought before you after mature consideration, great anxiety and consultation, is that we should put ourselves right with you by carrying forward this sum of £200,000, minus the balance standing to the credit of the profit and loss account, as a loss. That would mean that it would be years and years before we should be in a position to pay you a dividend. But if we write down your capital, although it does not affect your property in that sense, still, as a matter of bookkeeping, we shall gain the object we have in view. We shall reduce our assets to their just value, and gradually, I hope, regain our old position. I may say that our proposal has the support of the large shareholders, almost all of whom have sent us their proxies. It is not by any means our intention to call up the whole of the money; we only want to open a new credit, and if the position get better possibly we may never be called upon to ask for the balance.

Mr. C. E. ATKINSON seconded the resolution.

The CHAIRMAN, having replied to one or two questions, then put the resolutions, which were carried *nem con.*

The meeting terminated with a hearty vote of thanks the Chairman and directors.

CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA, LIMITED.

AN INTERIM REPORT.

THE directors of the Consolidated Gold Fields of South Africa (Limited) have issued an interim report on the return of one of the managing directors (Mr. C. D. Rudd) from South Africa, conveying the latest information in regard to the progress of the company. The report states that during the year £600,000 5½ per cent. debentures have been issued, thus largely increasing the revenue earning capacity of the company. The revenue, which for the first half of the current year exceeded that of the period ended December 31, 1892, continues good, and the realised profits during the current half-year are also in excess of those of the corresponding period of last year. The accounts of the company will, as before, be made up to the 30th inst., and the directors hope in due course to be able to recommend an increased distribution to shareholders. Since the issue of the annual report some considerable changes in and additions to the company's investments have been made, more particularly in Witwatersrand gold stocks. In regard to these investments the company's principal buildings are now as under:—

		Shares.
The Luipaard's Vlei Estate and Gold Mining Company	say	90,000
The Rietfontein Estate and Gold Mining Company	„	45,000
The Simmer and Jack Gold Mining Company	„	40,000
The Bonanza Company	„	36,000
The Geldenhuis Estate and Gold Mining Company	„	27,000
The Crown Reef Gold Mining Company	„	25,000
The Orion Gold Mining Company	„	7,000
The City and Suburban Gold Mining Company	„	5,000

These companies have during the period under review made excellent general progress in the development of the mines, and the erection of machinery and surface works. In addition to the above the Consolidated Gold Fields has interests in the Apex Mines Company, the Braamfontein Estate Company, the Middlevlei Gold Mining Company, the Teutonia Gold Mining Company, the Transvaal Consolidated Lands Company, and other mining and land interests. These companies, not being so advanced in development as the outcrop companies (although, wherever proved, equally rich in ore), have, in the judgment of our management, presented more favourable opportunities for cheap investment, and our company's holdings in these are, consequently, proportionately large and important, the principal ones being:—

		Shares.
Gold Fields Deep (Limited)	say	360,000
Village Main Reef Gold Mining Company	„	115,000
South Simmer and Jack Gold Mining Company	„	100,000
Champ d'Or Deep Level Gold Mining Company	„	90,000
South Rand Mines (Limited)	„	70,000
Crown Deep Gold Mining Company (late Rand Deep Level Company)	„	45,000
Roodepoort Deep Level Gold Mining Company	„	45,000
Rand Mines (Limited)	„	20,000
Geldenhuis Deep (Limited)	„	10,000

The company's investment under the heading of "Diamond Stocks" consists of its holding in the De Beers Consolidated Mines (Limited), amounting to 20,000 shares. The company has recently reduced its working expenses by some £300,000 per annum, and this, together with the conversion of its debenture issues, will considerably increase the profits available for distribution. The condition and prospects of the company itself remain as good as ever, and the sale of diamonds, even in the face of a very limited American demand, continues satisfactory. The principal holdings in the British South Africa Company and in companies working under its sphere of influence, are as under:—

The British South Africa Company	say	170,000	shares.
Ditto	„	80,000	debentures.
Frank Johnson and Co. (Limited)	„	90,000	shares.
Mashonaland (Central) Gold Mining Company (Limited)	„	20,000	„
Mashonaland Agency (Limited)	„	20,000	„
Rhodesia Development Company (Limited)	„	19,000	„

The position of the British South Africa Company is far better and more secure now that the Matabele nation has been finally dealt with, and terms for the future administration of the country have been settled by Her Majesty's Government in an equitable spirit, and it now rests upon a broad, substantial basis, which should lead to undoubted prosperity. Satisfactory news continues to come to hand in regard to gold prospects, both in Matabeland and Mashonaland, and the general feeling is that the country only awaits the advent of railways and introduction of capital to take its place as a large gold-producing territory.

The most important business of the year has been the acquisition of the share holding in the Simmer and Jack and the South Simmer and Jack Companies, and the purchase of 177 claims known as the "Salmon Block," 67 claims known as the "Consolidated Deep Block," and a considerable interest in the 229 claims known as the "Rand Victoria Mines," and others, costing (exclusive of the before-mentioned purchases of shares) £252,000, the object being to consolidate these valuable properties under one efficient management, with ample working capital. The scheme has ultimately been placed on a satisfactory, and, the board believe, a final basis. Proposals for amalgamation have been approved of by the directors of the Simmer and Jack, and will in due course be laid before the shareholders. The directors are confident that so favourable a scheme to all interested will meet with unanimous support. It cannot, however, be looked upon as completed until the shareholders of the Simmer and Jack Company have actually approved of it. Should opposition arise from that quarter, the directors are thoroughly satisfied with their investment, and are prepared, as regards the deep level blocks, to proceed with development independently. It is proposed that the capital of the new company shall consist of 300,000 shares, made up as under:—

To shareholders of the Simmer and Jack, say	107,000	shares.
To Consolidated Gold Fields of South Africa, and others, for acquisition of their properties, say	98,000	„
For working capital to be issued pro rata, and guaranteed by the Consolidated Gold Fields of South Africa at £6 per share, thus yielding a working capital of £270,000	45,000	„
For reserve	50,000	„
	300,000	„

Detailed expert reports more than confirm the estimate of value placed on the Simmer and Jack property of the management, and on no large area of mining ground on the Witwatersrand has the value been so extensively demonstrated as on the entire block of deep level claims above referred to. The Geldenhuis Estate and Geldenhuis Deep join on the west, the Primrose and Rose Deep on the east, and a vertical shaft near the extreme southern boundary of the Simmer and Jack itself, a vertical shaft on the South Simmer and Jack, and no less than three bore holes on various parts of the property (one of which proves the reefs at a distance of nearly a mile from the outcrop), all tell the same tale of rich and continuous formation. The entire amalgamated block will have an area of some 900 claims, or about 1200 acres, every yard of which is now held to contain the main reef series at a practicable mining depth, and to be at least as rich as the average of the surrounding companies' claims.

The board have no hesitation in stating that when once this amalgamation has been finally arranged the company will hold approximately a one-half interest in a mining undertaking which (considering that it possesses claims from the outcrop down to one mile on the dip, and that the reef formation has been demonstrated throughout, and that the development already done justifies the hope of dividends almost from the start, and also considering its valuable and ample water and surface rights) will rank as the largest and most perfect mining property not only on the Witwatersrand, but in the world. The cost to the company is a little over £1000 per claim, or say £200 per claim fully equipped and developed, this figure leaving an enormous margin of profit.

Captain E. F. Rhodes (brother of the managing director) has accepted the position of resident director in Johannesburg.

In conclusion, the directors remark that this great controversial question as to the relative values of "outcrop" and "deep level" claims is an interesting one, but resolves itself purely into what class of investment is favoured by and is suitable for each individual investor. The claims of sound "outcrop" companies are capitalised at the market rates of to-day at from £10,000 to £35,000 per claim, whereas the average of this companies "deep levels" will cost when fully developed and equipped little more than £3000 per claim. An individual buying into such "outcrop" companies will get good interest for his money, and the chance of some rise in value. On the other hand, one who buys "deep levels" discreetly can put in £1 with the reasonable hope of realising from £3 to £5 in three to five years. As regards "deep levels," it is acknowledged by all the leading experts that the element of risk in respect to the continuity of the formation and the yield of gold is infinitesimal, and to a great extent what are at present called "deep levels" are already proved in the abstract.

The predictions of Mr. Hamilton Smith and other experts in the past are being steadily borne out; the present production of the Rand is about £8,000,000 per annum, and the end of the century will see it not far short of £20,000,000 per annum. The directors feel that the company, with its vast interests standing at far under intrinsic value, was never in a sounder position than it is to-day, though even with its large resources some of the valuable blocks of claims must still for a time remain undeveloped.

NEW ISSUE.

CONVERSION AND REDEMPTION OF THE IMPERIAL TURKISH 5 PER CENT. LOAN OF 1854 AND 4¼ PER CENT. LOAN OF 1871.

Issue of £8,212,340 3½ Per Cent. Bonds.—Secured by the Egyptian Tribute.

HIS HIGHNESS THE KHEDIVE OF EGYPT has, by an engagement entered into by him and published on the 2nd June, 1894, in the *Journal Officiel* of the Egyptian Government, undertaken to pay to the Bank of England the annual sum of £329,249 6s. 1d. for the service of this loan. This engagement will continue until the whole of the loan has been redeemed, and the annuity is, under the instructions of His Imperial Majesty The Sultan of Turkey, secured by the Egyptian Tribute. His Imperial Majesty The Sultan of Turkey having, by an Iradé, dated the 14th May, 1894, authorised the above loan, His Excellency Nazif Pacha, Minister of Finance of the Ottoman Empire, has, on behalf of the Imperial Ottoman Government, contracted with Messrs. N. M. Rothschild and Sons, of London, Messrs. de Rothschild Brothers, of Paris, and the Imperial Ottoman Bank, to carry out the above operations. Subscriptions may be made either in cash, or in bonds, which have not been previously drawn, of the Turkish 5 per Cent. Loan of 1854, or of the 4¼ per Cent. Loan of 1871.

Subscribers in bonds will receive allotment in full.

5 per Cent. Loan of 1854:—For every £100 of the 5 per cent. bonds subscribers will be entitled to receive 3½ per cent. scrip of equal nominal value, and in cash, a bonus of £6, as well as £1 6s. 4d. (less income tax), being interest at 5 per cent. per annum from April 10 to July 15, 1894, the date from which interest will commence on the new stock.

4¼ per Cent. Loan of 1871:—For every £100 of the 4¼ per Cent. Bonds, subscribers will be entitled to receive 3½ per Cent. Scrip of equal nominal value, and in cash, a bonus of £6, as well as £1 2s. 4d. (less income tax), being interest at 4¼ per cent. per annum from the 10th April to the 15th July, 1894, the date from which interest will commence on the new stock.

For fractional parts of £100, proportionate allotments and cash payments will be made, but in cases where the total of the bonds presented for conversion is not a multiple of £20, allotment will be made as nearly as the smallest denomination of bond will permit, and the difference adjusted by a cash payment to the subscriber.

CURTICE'S INDEX.—Another volume of Curtice's "Index to *The Times*, the London Morning and Evening Papers, 120 Weeklies, and 31 Provincial Newspapers" is now in the hands of the public, and will compare favourably with previous issues. The period covered by the volume is from July 1st to September 30th of last year, and the enormous labour entailed in the production of the volume is apparent at a glance. A good deal of criticism has been directed against the arrangement, which is alphabetical, but the enormous difficulties inherent in the task have not sufficiently been taken into account, and the plan pursued, though, as inevitably must be the case with any plan difficult to follow, is perhaps the best circumstances would allow. To a certain section of literary men the book will, no doubt, be extremely useful.

GOLD & OTHER MINERAL RESOURCES OF WESTERN AUSTRALIA.*

By R. HERBERT LAPAGE.

GOLD is said to have been first discovered in this colony in 1688 by Dampier, the buccaneer who spent some time in searching for it on the north-west coast, and evidently with success, judging by the fact that on some of the old Dutch charts this coast is marked "Provincia Aurifera;" and also that in 1888 rich alluvial gold fields have been found in the same district. There are now seven declared gold fields, of which, in the author's three visits to Australia, he has had occasion to inspect two—namely, that of Yilgarn and Coolgardie. These two he purposes to deal with at some length, but before doing so he wishes to give some information about the other gold fields obtained from trustworthy sources.

Kimberley Gold Field.

This is situated in the north-eastern corner of the colony, and covers an area of 47,000 square miles. Its principal diggings are near the eastern boundary of the colony, about 212 miles by the telegraph line from Wyndham on Cambridge Gulf, and 304 miles from Derby on King's Sound, in the broken country at the head of the Elvire and Mary Rivers, the main tributaries of the Ord and Fitzroy Rivers. It was discovered in 1882 by the late Mr. E. T. Hardman, Government geologist; in 1884 he reported on the district, and issued a map showing the likely places for gold, which all proved correct. The alluvial deposits being in many cases very thin the miners did not waste time by sinking, but proceeded to work rapidly over the surface, consequently delusive accounts became circulated in other countries as to the richness of the gold field, owing to the large amount of gold that was exported from it in a short space of time. The climate of the district varies, being hot and unhealthy near the coast, but somewhat pleasant in the interior, where the land is higher; the heat is great in summer, but the nights generally cool. Tropical rains prevail in the hot season, and light occasional showers in winter, and these keep the rivers and creeks from drying up. Certain parts of the district are very well watered, and good water can be obtained plentifully there by sinking. In other parts the water supply is much more scarce; the rocks lie horizontally, and the water is found either on the top of or a little way into the shale beds, beneath which the whole subterranean drainage from the interior passes.

Pilbarra Gold Field,

situated in the north-west of Western Australia, in the district lying between the coast on the north, the Fortescue River on the south, and the De Grey River and Warburton's Great Sandy tableland on the east, was proclaimed in 1889, and covers 32,000 square miles, and is a very promising mineral region. A large, low, alluvial plain following the coast line is broken here and there by rocky hills, while to the south and east rises a high tableland, in the northern edge of which are the sources of large rivers; these cut deep gorges through the limestone and quartzite rocks and flow on through flats bounded by rough sandstone ranges, and by deep ravines through rough broken hills of schists, slates, sandstones, quartzites, conglomerates, &c., into alluvial plains which extend to the sea coast, fringed by mangrove swamps. There are, besides gold, traces of the existence of precious stones, and on this gold field there is no difficulty about water. The Mallina claim is being worked by an English company, and some very rich stone has been found.

The Ashburton Gold Field,

proclaimed in 1890, has an area of 8200 square miles. The gold was first found at a place called the Top Camp, in some deep creeks on the south side of the Ashburton River, and in 1890, 20,000 ounces of alluvial gold were taken out, the largest nugget weighing about 6 lbs. No gold-bearing reefs have as yet been discovered, but all indications show promise of a rich yield of gold when a sufficient amount of capital is laid out.

The Murchison Gold Field,

proclaimed in 1891, covers an area of 32,000 square miles, and is situated on the Upper Murchison River, 200 miles from the coast, about eight days' journey from Geraldton. The principal auriferous belt is at the east side of the area, about 200 miles from the coast, and runs north and south from West Mount Magnet to Austin's Lake, then north-east to Lake Annean and Yagahong. Other rich patches lie further east, and nearer the coast. The natural features of the portion of the field on which gold has been discovered consist chiefly of a vast, high, sandy tableland, presenting a broken surface consisting of salt marshes or lakes, bordered by salt, sand, clay, gypsum flats, from which rise low rough hills of metamorphic rock, or white cliffs, at the top of which are sandy plains, the remains of the ancient tableland. There are no rivers of any size, but the few creeks are emptied into the salt flats, where they overflow into the rivers running towards the coast. The hills are mostly low, consisting of ridges of hard metamorphic rock, near which the rich discoveries of gold have been made. A number of reefs have been found, bearing gold in large quantities along their outcrops, but the depth of the reefs has not yet been ascertained. The richest stone is a granular quartz, containing a good deal of carbonate of iron, with gold all through it, while the most showy specimens occur in the white stone, where the gold is often in large pieces. There is said to be very rich stone at some of the mines. During the quarter ending June 30, 1893, the Nannine Co.'s battery yielded 71 ounces 3 dwts. 10 grains from 13½ tons of stone, and the Day Dawn battery from 256 tons gave 375 ounces of gold. The Star of the East Mine is doing well. This field is on the same line of country as the Yilgarn gold field, and in a direct line between it and Ashburton, so that this belt having proved auriferous in three places in a distance of 700 miles, it is probable that other rich discoveries will be made. The field is fairly well watered, and most of the water is good; even near the salt lakes, if a well is sunk a short distance away the water is found to be fresh.

Yilgarn Gold Field.

This field was discovered in 1887, and proclaimed with an area of only 13,000 square miles. In October, 1892, two prospectors, Bayley and Ford, found gold at Coolgardie, and others found it in various parts; in consequence of this, in September, 1893, the Government increased the size of the Yilgarn field to 45,000 square miles. The author proposes dealing at greater length with this gold field than with the foregoing ones, being enabled to do so by having had much personal experience connected with it. At the end of 1892 he was commissioned to go to Australia to select a large auriferous area in the vicinity of Coolgardie, the land having been purchased (with the option of selecting 216,000 acres out of about 1¼ million) by the Hampton Lands and Railway Company before the discovery of gold was made. This field is the most advanced in the colony, but the appliances for saving gold are inadequate, and many improvements and economies could be effected by further expenditure of capital.

The soil about Coolgardie and the Hampton Plains is almost uniformly of volcanic origin, being a rich red loam; the author saw sections on the sides of the creeks and gullies where the soil was exposed, showing a depth of from 5 to 10 feet. The height above the sea is about 1500 feet. The district consists of undulating lands forming large flats, and low hills varying in height from 50 to 300 feet. The formation of the country and hills is slate, diorite, and ironstone in abundance, freely intermixed with mica schist and hornblende. The network of quartz reefs runs north and south, with a tendency to the east. The author saw some very fine bright looking jasper reefs a little west of Lake Lefroy standing out in great prominence; he also found indications of opals. The country is covered with wood, the chief sorts being salmon-gum, gimlet wood, morrell, sandal wood, wild peach, &c., samples of which are in the room. There are also large open flats not wooded, apparently formed by the overflow of one lake into another. The lay of the country is suitable for conserving water in reservoirs. There is abundance of feed for stock, and the bushes are green all the year round, thus supplying feed summer and winter. There are three different varities of salt bush, some of it as much as 5 feet high. Some of it was boiled as a vegetable by the members of the expedition; it tastes something like spinach.

In April this year the Government proclaimed Coolgardie a separate gold field, with an area of 67,500 square miles, and altered Yilgarn gold field to about 40,000 square miles.

Dundas Gold Field.

This was proclaimed a gold field in August, 1893, and has an area at present of about 14,000 square miles. It adjoins the Yilgarn gold field, and lies 100 miles in a south-easterly direction from the town of Coolgardie, and the same distance from the town of Esperance Bay on the south coast. It is a narrow belt of gold bearing reefs, running like the Coolgardie reefs, north and south and slightly to east. The country has the same formation of slate, diorite, and ironstone. There has been practically no alluvial gold found in the district, and it would appear that the reefs have not shed their original treasure. The reefs have been reported to be true fissure veins. There is a good rainfall (averaging 18 inches a year), and abundance of timber, so that when capital is forthcoming this field is likely to come into prominence, being so near to a port. During the author's visit to the gold fields he was very much struck by the absence of surface water all over the country; there is indication of very heavy rains, and also of protracted droughts. As yet no precise gauge of the rainfall has been taken at Coolgardie, but it is said to have been not less than 15 inches last year. The water difficulty is the most serious thing the miner has to contend with until he reaches water in a shaft on the reef. At present a great portion of the water supplied to the fields is provided by condensers erected on the shores of the lake; these are necessary, as almost immediately after heavy rain the rain water invariably becomes salt from lying on the bed of the lakes. The drinking water is sometimes carted a distance of 35 miles from the huge bald granite rocks, and the author is of opinion that in addition to constructing dams at the base of these rocks excavations might be made in the granite rocks themselves. The Government are, however, taking the water question seriously in hand, and have already constructed some large reservoirs at Coolgardie, and are also boring for water.

Miscellaneous Minerals.

Silver has been discovered in the districts of Northamption and Roebourne, but hitherto has not proved to be in paying quantities. Copper was first discovered in the Northampton district, and several mines were worked with much profit until the great fall that took place in the value of this metal.—Lead: The first discovery of lead in this colony was made in the Victoria district about the year 1840, and several rich lodes have been worked by English companies.—Antimony: There are some very good lodes of sulphide of antimony in the Raebourne district, and their value is in most cases greatly increased by the quantity of gold they contain. They have not be worked yet, having often been put down as small lead lodes.—Tin: In 1888, Mr. Stinton found some stream tin near Bridgetown on the Blackwood River, which led to the discovery of rich deposits, extending over about 100 square miles, but no lodes have been found up to the present. The tin fields are likely to produce great wealth if properly worked.—Iron: This is essentially an iron country, for one cannot travel far in the parts where the older rocks appear on the surface without finding a lode. It occurs in many forms, but the chief are magnetic and hæmatite (black and red oxides) which occur in immense lodes, and would be of enormous value if cheap labour could be obtained.—Zinc: Blende is found in the Geraldton district, associated with galena, but not in payable quantities. Lately a large lode of very pure metal has been found a little to the south of Perth. Coal has been found on the Irwin River, not far from the Midland Railway, but the sinkings have not been made to any great depth. Some of the outcrop was tried on a coasting steamers with fairly good results, but the quality found does not at present seem to justify much expenditure. Coal was also found on the Collie River in 1889, and Dr. Robertson, a leading authority on coal in New South Wales, declares it to be true coal of a high class. Graphite was found in some ferruginous lodes in the Champion Bay district, and was tested some years ago, but proved to contain too much iron to be of any commercial value. Graphite has also been found between the Warren and Blackwood Rivers in the south west, but very little work has been done, though several claims have been taken up. Mica is found on the Hampton plains, and at Bindoon and on the Blackwood River; the specimens so far are too much iron-stained to be of commercial value.—Kaolin (china clay and pipe-clay): Throughout the Darling range, and in most of the granitic country, large deposits of kaolin are found, many of which are pure enough to be used as whitewash. These deposits will be of great value for the manufacture of china, when the population increases. Asbestos has been found on the Hampton lands, near Coolgardie, in small quantities, but as yet the finds have not been followed up. From the specimens shown here it appears of good quality. Considering the enormous size of the colony and the small amount of prospecting that can be done with so few inhabitants, there is no doubt that Western Australia is decidedly a promising mineral country. There is a great want of capital for developing the mineral resources; every encouragement is offered by the Government to open up the mineral wealth.

DISCUSSION.

In the discussion which ensued, Sir MALCOLM FRASER spoke ably and to the point, giving a lucid sketch of the wonderful rise of Western Australia, and urging with admirable cogency that its future showed token of exceptional prosperity.

Mr. C. A. MORRING spoke favourably of Western Australia, remarking that the great difficulty was the water question.

Mr. ALBERT F. CALVERT contributed the following observations:—It is extremely gratifying to have listened to the interesting summary of Mr. Lapage's experiences during his travels in a highly interesting portion of Western Australia—a colony in which, I need scarcely say, I take a very deep interest. Her past history has been to me a subject of delightful study and research—the present is an ever-vanishing point, passing from yesterday to to-day—but, beyond all, I am intensely interested in her future. What most concerns me personally, and what presents the most immediate prospect of brilliant colonial prosperity, is the full development of her vast mineral wealth. Then, among minerals, the one above all others which urges itself most prominently is the metal—gold. The author of the paper we have just heard has evidently gained his personal experience of the gold regions on the Yilgarn field, and especially on that portion of it known to the world as Coolgardie—a name, by-the-way, much better known in London than that of the parent field. I note that Mr. Lapage has fallen into what I conceive to be an error—repeated in the last two Australian Year-Books, compiled by Mr. Malcolm A. Fraser, Registrar-General, under sanction of the Government—namely, he has stated that the proclaimed area of Yilgarn gold field was 13,000 square miles. A moment's glance at the map would have shown him, I think, that Murchison, Pilbarra, and Yilgarn were of equal area when proclaimed. Kimberley was, of course, the first and largest of the gold fields. I am interested to hear that the author did not fail to observe the red character of the soil which commonly exists throughout the Coolgardie and Hampton Plains districts. I would remark regarding this peculiarity of colouring that it is due to the presence of the oxide of iron, which prevails in the richest gold fields from the decomposition of the sulphides. Then, again, referring to "the bright-looking jasper reefs" which attracted the travellers attention. These, of course, derive their colour from the admixture of oxides of iron with the silica. It would need further and closer investigation to ascertain whether they originate from a primary source, or whether they result from secondary action by decomposition of the original elements, and the recomposition of the altered and oxidised surface combinations. If I may be allowed to add a few words regarding the general geological formation of Western Australia, I would say that the general character of the auriferous country in this colony is a series of belts following in the south the coast line which is a little to the W. of N. and E. of S. The gold reefs traverse the lower Devonian schists which are more or less altered by the action of the dioritic bosses which have distorted them in many places. These schists lie directly upon the granite, which has lifted them to an angle of between 50 to 45°. The granites do not appear in a mountainous form, but take the shape of low ranges, which, in many districts, have not outcropped more than sufficient to give the country an undulating character. It is these north and south belts where the diorites and sometimes trachytes have played their part, which are of exceeding importance from an auriferous point of view. As we leave these auriferous belts of Lower Devonian schists we approach more level country, which may be characterised as Upper Devonian sandstones. These appear to be almost entirely devoid of animal and vegetable life, and there are vast tracts of these sandstones whose fauna might be reduced to the spinifex (triodia irritans). The annoyance caused by this plant (the spinifex) are not realised on this side of the globe; but the very name of this vile growth is enough to send a thrill of horror through the Australian bushman. These sandstones occupy a large area, and here and there patches of clear plains have several inches of salt. In fact, these sandstones are in many instances highly saline, and after sinking for water it often turns out too brackish to be of any value for domestic purposes; whereas wells sunk in the schists near the granites are pure and wholesome. These auriferous belts following the coast line nearly north and south are deemed to be a system of parallels. Two of these have been already traced at intervals, and proved to be very rich, but a third parallel may possibly exist further in the interior, though up to the present time its existence has not been fully demonstrated. Now, these parallels extend northwards for about 1000 miles, when the coast suddenly alters its geographical contour, and runs eastwards. The auriferous belt has accommodated itself to this change of circumstances, and departing from its original line swerves round and follows the line of the coast, taking a direction of a few degrees north of east. This is an illustration of how the geographical features correspond with the geological; or rather how the geological conditions have evolved the present coast line. Regarding the alleged discovery of gold by William Dampier, I think it extremely doubtful, and having read carefully through his Journals I can only say that he makes no reference whatever to the fact. On the other hand, he humorously remarks that except for the pleasure of discovering the barrenest spot on earth he would have been sorry ever to have seen the coast of New Holland. I am bound to admit that Mr. Welbe, who accompanied Captain Dampier on one of his memorable voyages to the southern hemisphere, claimed to have come upon a territory of surpassing richness in both gold and silver. Still, it is to my mind incredible that so voluminous and accurate a writer as Dampier should have failed to mention it, had it been really the case. I must join issue with the author regarding his statement that the antimony lodes have been put down as small lead lodes. I have had personal experience of antimony working in the Roebourne district. Crushings have given very high returns, and one parcel sent home from the Mallina Mine on the Pilbarra gold field was assayed here in London by Messrs. Johnson, Matthey and Co., and found to yield 20 ounces of gold to the ton. Speaking of Pilbarra, it must be remembered that these fields suffer from the lack of opportunities enjoyed by the more fortunate southern fields. Coolgardie has been assisted by sensational discoveries; the Murchison has had the advantage of a certain reputation and a more accessible situation; while Yilgarn has been supported by the favour of the Government. Moreover, all these fields are in the southern district, and are the first to catch the eye and ear of the speculator. It is an extraordinary thing that with the exception of my own efforts to bring Pilbarra to the front, I am not aware of any other person outside the colony who had attempted to describe, or has even mentioned, this important field. Even the Government Geologist, after devoting 16 pages of printed foolscap to the Murchison fields in his report for 1893, dismisses this district in one line: "Pilbarra and Ashburton," he says, "have neither proved yet to be large reefing districts, so need not be mentioned." Pilbarra has truly suffered from every ill that a distant, untried, and unknown gold field could be heir to, but it has always possessed a few miners having pluck and knowledge to test its capabilities. It is to the courage, faith, and perseverance of these men that Pilbarra owes its recognised existence to-day, and the same pillar of strength which unearthed and supported it in the past, seems certain to carry it onward to success and prosperity in the future.

Dr. WOODFORD also expressed a high opinion of the colony.

Amongst other speakers were Professor Hull, Sir Charles Crawford, Professor Boyd Dawkings, Mr. John Calvert, Mr. A. G. Charlton, Mr. E. Bainbridge, Mr. Jeremiah Head, Mr. J. G. Binns, &c.

A vote of thanks was passed to the author for his paper.

* Summary of a paper read yesterday before the Federated Institution of Mining Engineers.

THE FEDERATED INSTITUTE OF MINING ENGINEERS.

MEETING IN LONDON.

THE 15th general meeting of the above Institution was held in the rooms of the Institution of Civil Engineers, 25, Great George-street, Westminster, on Thursday and Friday.—Mr. ARTHUR SOPWITH, the President, presiding. In his address, of which we give a summary, he naturally first paid a tribute to the value of the Institution, and to the excellent work it had done in the past and what it was likely to do in the future. He then alluded, in terms of regret, to the great loss sustained in the death of Sir George Elliot; to that gentleman's profound scientific knowledge; and to the benefit he had conferred upon the mining world by his inventions.

The Present Position of Coal Mining.

Briefly alluding to some aspects of the present position of the coal industry and coal mining, as compared with a quarter of a century ago, the PRESIDENT said:—The actual development of the coal trade has been enormous, the output having increased 77 per cent., or, in round numbers, by no less than 81,000,000 tons. A feature of much interest is that our rate of export has far exceeded all anticipations. Since 1868 it has quadrupled, and this in the face of the fact that our Continental neighbours appear to have increased at the following rates:—Germany, 180 per cent.; France, 107 per cent.; Belgium, 54 per cent.; while America has advanced by leaps and bounds until its production does not fall far short of our own.

At the present time we are face to face with one of the extreme periods of depression which characterise modern trade, and it is somewhat difficult to bring one's self into such a state of mind as to take a cheerful view of the future. At the same time, while statistics may be somewhat misleading unless carefully dealt with, we are, I think, justified in assuming that highest production has not yet been reached, and although there is a tendency for the average annual rate to decline, there is no direct evidence that on the average this will be in fast decreasing ratio. Indeed the table made out for the Royal Commission by Mr. Price Williams appears as yet one which may be taken as a fair guide, excepting so far as the greater rate of exportation requires addition. While the fluctuations of recent years have been more marked, a careful review of the trade and conditions shows a certain general analogy to those prior to 1868, and there is every reason for believing that there will be an increasing field for our energies as mining engineers in meeting the demand. This fairly hopeful view of the future is, however, very certain of shipwreck if experimental legislation and visionary schemes be too freely indulged in. We can only trust that the common sense of all engaged in the industry may enable it to be kept free from those disastrous social wars which do more to damage our prosperity than any of the natural, technical, or ordinary commercial and manufacturing difficulties which in 1868 were held out as a possible bar to the future prosperity of the coal trade.

Our Knowledge of our Coal Field Resources.

The knowledge of the resources of our coal fields can hardly be said to have increased very materially, but such remark applies to completely new views as to the hidden deposits. It is true that the existence of coal under the chalk formation in the south-east of England, and which had been authoritatively pointed out by Mr. Godwin-Austen and others, is now a proved fact, although the actual value of the field is as yet an unknown quantity, and its extent indeed so far limited to a single point. While the discovery forms an actual starting point for exploration which may ultimately have far reaching effects on the manufacturing industry of the country, the nature and extent of the coal-basin or basins are open to the variety of scientific opinions which accompanied the discussion on Mr. Marcel Bertrand's paper, read before this Institution at a recent meeting.

The extension of the great Yorkshire and Nottingham coal field under the New Red and Permian formations has been more definitely determined by the new collieries at South Kirby, Cadely, where the Barnsley seam has been proved at depths of 1920 and 2310 feet, while the continuation still further to the east has been proved to an important extent by a recent boring between Doncaster and Gainsborough. Since the Coal Commission reported in 1871, some of the largest collieries in the Midland district have been opened out, viz., Bestwood, Linby, Newstead, Pleasley, Langwith, and Bolsover, all working coal to the east and under the red measures. The question as to the eastern rise of the basin is, however, to a considerable degree subject to the same conjecture as in 1871. So far there does not appear to be a single geological fact to prove that the coal-seams will not be found to extend under Lincolnshire. We may, nevertheless, rest content for the present with the 23,000,000,000 tons of coal estimated in 1871. The winnings at Sandwell Park and Hamstead in 1874 and 1879 proved the extension of the valuable thick coal seam of South Staffordshire, 1¼ miles to the east of the so-called eastern boundary fault, after sinking through 600 and 1470 feet respectively of Permian measures, but these collieries have not determined the position of the coal-measures immediatly to the east of them, and such area is still open to the uncertainty which attaches to the ground east of the Cannock Chase or northern part of the South Staffordshire coal field, and where the measures are evidently thrown down to an extent of not less than 3000 feet. On the other side recent sinkings to the west of Nuneaton have proved the Warwickshire seams at increased depth, and lying at a favourable inclination towards Hamstead. In the intervening area there appears greater certainty as to the existence of valuable measures than was indicated in 1871, and the district between Birmingham and Nuneaton is likely to be the future Black country.

When we come to deal with the other areas adjoining the South Staffordshire coal field, and lying between it and the North Staffordshire, Shropshire, and Coalbrookdale coal fields, we have, I think, no important new facts to guide us in forming conclusions other than those arrived at for the purposes of the Coal Commission. The quantity computed for these areas was no less than 1,000,000,000 tons, representing something like 20 per cent. of the total quantity estimated as being beyond the natural defined coal fields, and lying at a depth of less than 4000 feet. Generally, we can only say that our knowledge is somewhat more conclusive, and that the existence of, comparatively speaking, inexhaustible stores of coal under the new formations is more convincingly impressed upon our minds.

Improvement in Technical Knowledge.

The gigantic strides of the coal trade, as indicated by the increase of output during the period in question, have necessarily been attended by continuous endeavour and improvement on the part of mining engineers and in all the various branches of mining, but on the whole coal mining has probably benefited more by the gradual perfecting of appliances and the increased practical adaptation of scientific principles already generally recognised than by any distinct innovation. It is certainly difficult to draw the line, as improvement upon a high standard of development approaches invention, but by innovation I mean matters which, if not necessarily original, have become entirely new features in mining since 1868.

With respect to the important question of ventilation, for instance, what is the present position? It is unnecessary to introduce any controversial matter by expressing an opinion as to the relative merits of the numerous types of quick-running fans, which have been so largely introduced of late, as against the large centrifugal fans of the earlier date. It is enough to say that while there have been most important improvements in the construction and accessories of fans, we are not very materially in advance of 1868, beyond the almost universal adoption of mechanical ventilation.

Other Inventions and the Electric Light.

The safety lamps of to-day are within a close approach to the actual realisation of their name, and are illustrative of the gradual perfecting of appliances to which I have referred. Notwithstanding the confidence that has been so frequently expressed as to the utilisation of the electric light, it still remains, and may probably for some time remain, the light of the future as far as general substitution for hand lamps is concerned, now that the term safety lamp is no longer a misnomer, and is the only really practical gas detector that can be placed in every man's hand. In the safe blasting of coal we have a distinct innovation in the employment of flameless explosives.

Of all the forecasts or conjectures made with respect to future mining, and based at the same time on evidently safe and reasonable grounds, and indeed on actual experience, there is probably none which has fallen so short of expectation as the dispensing with hard manual labour in the getting of the coal. This is the more striking, as mechanical skill and device have been not only continuous but marvellously progressive during the present century. Notwithstanding the fact that there is now a much higher development of coal getting machinery its use is very limited, and the real epoch of mechanical coal getting must still be said to be in the future. It is to some extent doubtful whether any existing type of machine, at any rate as constructed, is an advantage in moderately thick seams, though there is no question as to the economy in very thin seams, and where the conditions are favourable.

The difficulty in cost of transmission of power has, no doubt, been a considerable obstacle in the way of development; further, the great weight of machine combined with unevenness of working face has under many, and perhaps most conditions counterbalanced the direct efficient mechanical value when actually at work, but probably the most important cause to show development has been the necessity of differently constructed types and proportions of machines to meet the varying conditions of seams.

The Value of Coal-Cutting Machines.

The desirability of substituting coal-cutting machines for hand-cutting is undoubtedly becoming more apparent, not merely in view of having thinner seams, but on account of the difficulty which exists, at any rate, in some districts, in getting labour to do the holing or undercutting properly. One may now make a forecast, with more probable chance of realization, as to the next twenty-five years being most distinctly marked by a practically universal adoption of mechanical cutting. There are, however, one or two points which will have to be attended to, one is that the machine must be specially made for the seam, and the workings laid out for its convenient use in all cases where massive machinery is used. I am strongly of opinion that universal adoption of coal-getting machinery will not take place until light portable machines, or rather tools, are made which can be easily used and controlled by one man; in other words, that it will, at any rate, in many mines be better to have a machine doing a mere fraction of the work of the machines as at present constructed. There is undoubtedly a very wide range as to variety of size and design.

The development of a new and useful source of power has been most rapid during recent years, and, above ground, this may be called the age of electricity, but, while the field for employment is so large and the adaptation so convenient, the complicated difficulties to be met with underground present obstacles which will probably involve comparatively slow progress. Electrical transmission of power is a distinctly recent feature in mining, although the potentiality may have been long recognised, but it has been brought up in line with its more old-fashioned competitor, compressed air. The relative merits of the two systems is far beyond even general condensation. I can only here express the opinion that while very high voltages and the risk of sparking are serious objections to the use of electrical motors in working faces, high tension currents can be safely insulated in most dry mines, and carried to certain points, and then adapted by transformers for use at many points in the mine. I am also decidedly of opinion that even low tension currents can be directly, economically, and safely conveyed by the employment of large sections of old rope for long distances.

Compressed Air and Electricity.

Whatever may be the ultimate outcome of the competition between compressed air and electricity, and this will, I believe, be a close rivalry for a long period, one is dealing with the past more than the future. In this respect we have to recognise the great improvement in compressed air machinery during the last 25 years. The compounding of air engines and the employment of coolers, the improvements in clearance of valves and the construction of same, the heating of air before use, and other more or less valuable improvements leading to an immense increase in the actual efficiency, have, perhaps, been as important mechanical and scientific additions as any made in any branch of engineering during the period. Here we have an illustration of what was quick attainment of apparently sufficient success (or so thought to be at the earlier period to which I allude, and when compressed air was coming into vogue), followed by gradual improvement extending over a long period. It will be interesting to watch the progress of the newer power which almost at once started on level terms with what may be called its long-experienced competitor.

In the early days of compressed air machinery the employment of auxiliary hauling power by means of small stationary engines at numerous points, or the use of locomotives, was a favourite idea, but little advance has been made, and one is inclined, as in the case of coal cutting machinery, to express astonishment at the want of progress. There is in both matters, perhaps, more room at the present time for material development and the exercise of mechanical skill and ingenuity than in any other branch of practical mining.

Mr. J. B. SIMPSON, in proposing a hearty vote of thanks to the President for his very able address, said he considered the future of the Institute a very great one. Deep coal mining especially in the future would require to avail itself largely of the advantages to be gained from these institutions.

Mr. EMERSON BAINBRIDGE said the President's speech was especially interesting, inasmuch as Mr. Sopworth had tested in his own collieries many of the mechanical appliances to which he had referred. He (Mr. Bainbridge) too was greatly surprised at the little development in coal cutting machinery. The development of machine cutting was much greater than here. He most fully recognised the great use of such machinery. He hoped they all recognised the importance of the Federation. Now that they were in this corporate form they had much greater chance of learning and availing themselves of the various improvements in all branches of mining. He had very great pleasure in seconding the vote of thanks.

The motion having been carried unanimously,

The PRESIDENT, in returning thanks, said he had endeavoured, as far as possible, to give a review of the last 25 years. Perhaps the most important points he had raised in his speech were in regard to the coal cutting machinery and the sources of power.

[Owing to the excessive pressure on our space, we are reluctantly compelled to leave over many of the interesting papers that were read.—Ed. *M.J.*]

COMPANIES AND THEIR DOINGS.

Reports, Balance Sheets, Dividends, &c., of Mining, Railway, Banking, and other Companies.

MINING COMPANIES.

El Callao Gold Mining Company.

THE report of the directors presented to the ordinary general meeting of shareholders held at the company's office in Ciudad-Bolivar, on the 15th March, stated:—Upon a proposal of the directors, and by a resolution of the general meeting of the 6th April, 1892, the extraction of the large pillars supporting No. 6 shaft to a depth of 208 vertical metres, was proceeded with about the end of the said month, and on the 17th July this shaft, which gave access to the central and deepest part of the mines, was finally closed, the expensive pumping operations being at the same time discontinued. The mine is now abandoned, and about two-thirds part of it full of water. In Nos. 5 and 8 shafts (the latter having been opened during the year) the exploitation north and south of the mine are being continued with all possible activity on both sides of the old workings in No. 4 shaft; but no improvement has yet been noticed in these parts. The lode continues gradually thinning in No. 5 shaft, and shows the same peculiar formation in No. 8 shaft. Towards the end of the year the crushing was reduced to 30 stamps. The remaining 30 stamps are set aside for crushing the quartz obtained from the Colombia Mine, from which El Callao Company receives one-half of the net returns. This is, of course, rather disappointing to El Callao shareholders, but the directors who are at the head of the company since its formation, and have some practical knowledge of this mining region, in the centre of which the company possesses a large establishment for treating minerals, will not be found wanting in their efforts to take advantage of all the benefits offered by the new plan of exploitation. The experiment made to explore some of the mines already known by way of helping and providing every requisite to each of them has not given any results, We undertook, for instance the exploitation of the Union Company's Mines, and had to abandon it after having spent 1,500,000 bolivars. We think that by taking advantage of our great installation for treating minerals, concentrating there the mineral from the different mines, and conveying the same by means of a Decauville railway, will give results that cannot be obtained by providing the necessary equipment to each mine. We have made a contract with the Colombia Company by which we undertake the exploitation of the mines for one-half of the net returns, plus 20 per cent. also of the net returns in repayment of the sums advanced by us. We have constructed a railway line running from the mill to the first mine (the old Caratal), and we have material in hand for the continuation of the line to the second mine (the old Tigre), and also for the extension of the line as far as the Santa Maria and San Felipe Mines in the concessions of the Union Company, which are situated on the same route. This system promises good results up to the present, and we have been able to pay a dividend of 1 bolivar per share for the month of January, which we could not have done had we been entirely dependent on El Callao Mine. It may call the attention of some of you that the Colombia shareholders receive dividends in months when El Callao shareholders receive nothing. This is because the Colombia shares on which dividends are paid only 4500, and with half of the net returns a dividend can be paid, whereas El Callao cannot do so because their shares amount to 257,600. The general meeting held on the 6th March, 1883, agreed upon the purchase for the term of five years of the mining properties of the Union Company, with option of repurchase by the vendors, and the necessary deeds were granted. The meeting of the 12th October, 1887, agreed to extend the term for three years, from April, 1888 to 1891, and again the meeting of April, 1889, further extended this term until the 1st April, 1894, for the repurchase by the Union of these properties. During all this period we have spent on these properties the sum of 1,558,462·97 bolivars (francs) in mining works, and the erection of a 20 stamp mill as well as for the other machinery for the mill and works. The Union Company have not been, and are not at present, in a position to take over the properties, and besides the periods on which they could have done so have expired. There is gold to be found in the Union properties, and we are constructing a railway that will run along the whole length of the concession as far as San Felipe Mine, which is 8000 metres distant from El Callao, with the object of carrying mineral from San Felipe and from other points of the concession to El Callao mill. The Union is a national company, and the majority of its shareholders being residents in this city, we think that it would not be fair to make use of our right by expropriating this company absolutely. The board of directors, animated with a spirit of equity, beg to submit to you the following:—Project of agreement: "The board of directors are authorised to cancel the contract of purchase of the Union Company's properties, and to consider as cancelled all accounts with said com any, on condition that the Union Company shall grant the sale of its properties to El Callao Company for value received, and a sum in cash which shall be stipulated in the deed of sale, in which it shall be also stipulated that the Union Company shall have the right to a fourth part of the net returns which the properties in question may produce hereafter."

Fraser and Chalmers (Limited).

The report of the directors states that the operations of the American company for the year 1893 resulted in a profit of $152,763·16. From this $56,477·10 was written off for bad and doubtful accounts and $75,000 appropriated for interest to this company on the mortgage bonds of $1,250,000, thus leaving $21,286·06 as the net profits. This is a somewhat more favourable result than that of the year 1892, and is largely due to a reduction in the working expenses. It is now evident that the extension of the Chicago shops carried out in 1891 and 1892 was, as regards time, unfortunate. When this work was undertaken business was excellent, and it was expected that the money required could be furnished largely out of profits. The unforeseen fall in the prices of silver, lead, and copper, by depressing these mining industries, greatly damaged the business, and to defray the cost of these new works it became necessary to use a portion of the working capital of the American company, and also for the English company to advance a large sum, amounting in all,

on December, 1893, to $364,343·57. The directors are of opinion that the gross assets shown on the balance-sheet of the American company are placed at figures above their real value. It is believed the results thus far obtained at Erith have been as satisfactory as could have been expected. The operations of the year show a profit of £11,647 14s. 1d. from all sources, which, with the profit of £6501 1s. 1d. carried over from 1892, gives a total credit of £18,148 15s. 2d.; from this it has been deemed advisable to set aside the sum of £5562 8s. 2d. as the beginning of a depreciation account, the remainder being shown on the balance-sheet. The financial considerations have led the directors to advise that the company be reorganised with a double purpose in view —first, to reduce the capital originally based on a condition of business in Chicago when the company was formed, which at the present time does not exist, and by this means bringing the nominal share capital nearer to its maket value; second, to raise additional working capital, thus placing the English company in a better position to do work in the most economical way, and to enable it to promptly execute the large orders now in hand, and to accept the future larger contracts which are confidently expected.

Booysen Land and Mining Company (Limited).

The directors have issued a circular, in which they remark that at an extraordinary meeting of the company, held on the 21st May ultimo, the resolutions for reconstruction, although supported by a majority of votes, were not carried. It was necessary to obtain a majority of three-fourths of those present, or represented by proxy, in order to carry the scheme of reconstruction then proposed. This majority was not obtained Several of the largest shareholders voted against the scheme, as they desired to have a liability of 10s. per share on the new issue, in order to provide funds to meet all possible requirements. Since that meeting the directors have consulted the principal shareholders, including Mr. Tapp, who holds some 25,000 shares —that is more than a fourth of the entire share capital of the company. The directors are happy to state that, following such a meeting, Mr. Tapp has joined the Booysen board of directors, and it is now possible to submit a united policy for the approval of shareholders—a policy which already includes in its advocacy the holders of half the Booysen Company's share capital. Mr. Probyn and General Wardell have resigned their seats on the board, and the board of the reconstructed company will be joined by Mr. Ludwig Neumann, a large shareholder. It is proposed to fix the liability on the shares in the reconstructed company at 10s. per share, but so that only 5s. per share (as originally contemplated) shall be called up if and when required, for the purposes of the undertaking, the remaining liability of 5s. being held in reserve, and only to be called up should special necessity arise hereafter, and then only on the condition that such calling-up be sanctioned by a majority of shareholders in general meeting.

— At a meeting of the directors of the CAPE COPPER COMPANY, it was resolved—"That a dividend of 1s. 3d. per share be declared on the cumulative preference and ordinary shares, free of income-tax, payable on the 2nd day of July, 1894, to the shareholders on the books of the company on the 16th day of June, 1894, and that the transfer books be closed during the said 16th day of June, 1894." Preference coupons No. 5 and ordinary coupons No. 17 will be paid at the above rate, free of income-tax, on presentation at the company's office.

— The directors of the WAIHI GOLD MINING COMPANY (LIMITED) have declared an interim dividend of 1s. per share (free of income-tax), payable on the 30th inst., warrants for which will be posted on the 29th inst. The transfer books will be closed from the 23rd to the 29th inst. inclusive, for the preparation of the dividend warrants.

— The report of the AFRICAN BANKING CORPORATION (LIMITED) for the half year ending 31st March shows a gross profit, including £4094 brought forward, of £47,412. After deducting current charges and rebate and writing off £5000 from incorporation and establishment expenses, and £266 for depreciation of furniture, there remains £8718, which the directors propose to apply in payment of a dividend at the rate of 3 per cent. per annum for the six months, and income tax thereon, which will absorb £4595, leaving £4123 to be added to the next account.

— The COPIAPO MINING COMPANY (LIMITED) notify that an interim dividend of 1s. 6d. per share, free of income tax, has been declared payable on and after June 21, and that the transfer books will be closed from 9th to 21st inst., both days inclusive. No. 10 coupon (which must be lodged at the office three days for examination) will be paid at the rate of 1s. 6d. per share, free of income tax.

— The MYSORE GOLD MINING COMPANY (LIMITED) has declared an interim dividend (free of income tax) of 2s. per share, payable 11th July.

— The MYSORE GOLD MINING COMPANY (LIMITED) has sold the gold obtained during the month of April last, which realised £16,259 8s. 9d.

— The NUNDYDROOG COMPANY (LIMITED) has sold the gold obtained during the month of April last, which realised £5982 1s. 10d.

— The BALAGHAT-MYSORE MINES (LIMITED) has sold the gold obtained during the month of April last, which realised £1725 1s. 6d.

— The directors of the FRONTINO AND BOLIVIA GOLD MINING COMPANY (LIMITED) have made a call of 6d. per share on the issued capital of the company, and at the meeting convened for the 27th inst. they propose to declare a dividend on 1s. 3d. per share.

— The annual general meeting of shareholders of the IMPERIAL OTTOMAN BANK is announced to take place on 27th inst., at 12 o'clock, at Winchester-house.

— Messrs. N. M. Rothschild and Sons state that they are informed by the Bank of California, San Francisco, that a bonus of 75c. (3s.) per share in the ALASKA TREADWELL GOLD MINING COMPANY has been declared, and that they will pay the amount of this bonus on and after the 11th inst. on presentation of dividend warrant No. 18.

— A dividend of 4s. per share is declared by the board of the CONSOLIDATED DEEP LEVELS (LIMITED).

— The secretary of the TOLIMA MINING COMPANY (LIMITED) notifies that an interim dividend of 10s. per share will probably be distributed in the course of the present month—but the date is not yet fixed.

THE rich strike in the Monitor Mine at Richmond Flat, near Pony, was made at a depth of 80 feet from the surface, where a body of ore 9 feet in width was encountered. An average sample from wall to wall will assay about $85 in gold to the ton. This property adjoins the revenue, which for a long time yielded a large quantity of rich ore. Manager Knox, of the Monitor Gold Mining Company, is now working an increased force of men, and teams are engaged in hauling the ore to Norris, from which place it will be shipped to Butte for treatment.

REVIEWS.

THE METALLURGY OF GOLD.

The Metallurgy of Gold. By T. Kirke Rose, B. Sc. (Charles Griffin and Co., Limited).

This is the first of a series of metallurgical text books, edited by Professor Roberts-Austen, which, to judge from the one now before us, seem to be primarily intended for the instruction of the students in the Royal College of Science. The object of the author has accordingly been to give a brief comprehensive account of the various processes now in use for the extraction of gold from its ores, and for preparing the precious metal in suitable conditions for its application in the arts.

The work naturally commences with a short account of the physical and chemical properties of gold. The former are well described, but the latter are not treated in sufficient detail; several important compounds and reactions, important even from a metallurgical point of view, being omitted. Unfortunately, too, this section is characterised by what can only be considered as a certain amount of carelessness that ought to have been avoided. Thus the author speaks of "aurous chloride," but of "gold proto-bromide," &c., whilst in the present state of chemical science the notation "Gold Dichloride, $Au Cl_2$" can hardly be regarded as admissible. Such slips are a serious disfigurement in a book intended for students, for whom accuracy of detail on all scientific points is a matter of primary importance. The author would have done well to have allotted far more space than he actually has done to the description of the amalgams and alloys of gold; it ought not to be possible for a student to read through this chapter, and yet remain in ignorance of such elementary facts as that the alloys of gold and lead in certain proportions are extremely brittle.

A good account is given of the mode of occurrence and distribution of gold, accompanied by a useful table of the world's annual output of that metal, although this latter is unhappily a couple of years behind time, this being rather a lengthy period when the conditions of an industry are changing as rapidly as in the present case. The next two chapters are devoted to alluvial mining, in both shallow and deep placers; it is, perhaps, a moot question whether this subject ought to find any place in a work devoted to the metallurgy of gold, or whether it ought not to be treated as a branch of mining pure and simple. There is, however, much to be said on both sides, and the author has probably pursued the wiser course in that he has supplied a short sketch that will probably serve to give students a fair idea of the general methods employed. That this sketch is of no use to the practical gold miner is quite beside the question; to supply the practical miner's wants is, we take it, not the object of the present work, besides which the miner who wants practical information has at his disposal the excellent work of Mr. A. J. Bowie, as well as others, on hydraulic mining. Mr. Rose, whose experience of hydraulic mining would appear to be limited, would, indeed, have done well to have consulted the above-named work, the valuable detailed illustrations in which would have proved of service to him.

The next few chapters are devoted to what is really the principal portion of the metallurgy of gold in actual practice to-day namely, the extraction of gold in the stamp mill; this section again is characterised by a want of attention to details, some of which though apparently trifling, are really of great importance, and many errors have been allowed to creep in. To instance only one, any unfortunate student who would attempt to secure the shoe of a stamp into the head, as recommended by the author, by merely driving it into its socket without the interposition of the universally used wooden wedges, would soon find out to his cost that the neglect of this apparently small detail could readily be fraught with most disastrous consequences. The drawings of the cam and stamp head are thoroughly misleading, and the author ought to have at least mentioned the fact that in modern stamp mills these parts are mostly made of cast steel.

Another point upon which stress ought to have been laid, but which is entirely omitted, is the fact that in modern practice it is found advisable to separate the rock breaker from the battery house; indeed, in the latest South African practice, the rock breaker mostly forms a part of the pit head gear. Such points as these are of great economical importance, and have often a decisive influence on practical results, a matter which no metallurgist ought to neglect.

The next few chapters are devoted to an account of the chlorination process, which is thoroughly well described, all the operations being treated in ample detail. Whilst we must confess that we are not in perfect agreement with the author on all points, yet we are very pleased to be able unreservedly to praise his treatment of this portion of his subject; as far as we know, this is the most complete description of the chlorination process in its various modifications that has yet been published. The cyanide process is next considered; surely, however, the author is in error when he states in his preface that the MacArthur-Forrest cyanide process is here given for the first time in a manual. His description does not differ materially from many others with which we are acquainted, and is so far defective that he gives no details of the plant employed. We do not understand why the author should cite Napier as the discoverer of the solubility of gold in potassic cyanide in 1844, when it is perfectly well known that Bagration announced the fact in 1843 in a paper that is frequently quoted. Mr. Rose has paid considerable attention to the chemistry of the cyanide process, and gives a good *resumé* of all that is known of the subject, which, after all, is not a great deal; it is still imperfectly understood, and urgently requires an exhaustive investigation.

The subject of smelting auriferous concentrates and the treatment of the mattes so obtained is barely touched upon, but we find a good account of the various processes used in refining gold, and particularly of the sulphuric acid parting process; here, again, we should have wished for further commercial details. The concluding chapters on assaying, more especially on the assaying of bullion, including a full account of the practice in the Royal Mint, will be found of use to assayers. The latter description is practically identical with that written by Professor Roberts-Austen for Dr. Percy's well-known work on silver.

This account of the metallurgy of gold will, no doubt, be acceptable to students of the subject; its gravest fault, in our opinion, is that the practical and commercial side of the question has been too much neglected. The only *raison d'etre* for metallurgy, as a science, is that it shall introduce economies in the practice of the art, and it cannot be too frequently or too forcibly impressed upon the student that he must make the commercial aspect of metallurgy his first consideration. Professor Roberts-Austen has ably handled this question in the concluding chapter of his work, and we think it is a matter of regret that Mr. Rose has not given it greater prominence. Another serious defect is that the illustrations are altogether inadequate; what is required in such a book as this are not rough general sketches, such as can be found in abundance in the catalogue of any maker of mining machinery, but exact reproductions of detailed working drawings to be invariably accompanied by scales, unless they are fully dimensioned. Mr. Rose is a great offender in this respect, and we are afraid that the large majority of his illustrations are far more calculated to mislead than to instruct the student who has never seen the various pieces of machinery intended to be depicted.

A PAMPHLET UPON SILVER.

A pamphlet from the pen of Sir Joseph McKenna—happily described as an analysis and exposition of the burning question of the century (silver)—has just been placed in our hands. The knowledge of his subje t displayed by the writer will commend his remarks to the consideration of political economists. The craving ambition of the pamphleteer to settle for all time matters which have been in dispute for decades does not actuate our present author. He has sought to treat the subject historically, to describe the effects of more or less experimental legislation, so that the reader may have the materials to form a judgment for himself, and not to lift his own opinions, valuable though they may be, bodily into other minds. The history of legislation on coinage matters is largely a record of pitiful blunderings. The reluctance with which the statesmen of many countries awake to the conviction that the standard of values did not depend absolutely upon their will—that the most firmly-rooted Government could not turn brass kettles into wealth by mere enactment—will surprise those minds accustomed to judge the procedure of the past in the light of to-day. Sir Joseph does not go further back than "the blundering legislation of 1816," but from that time forward there is a sufficiency of error to chronicle and expose for future guidance. The second Lord Liverpool, in particular, is the recipient of the greatest censure for "an unworthy and short-sighted freak, to grab a small advantage for the exchequer;" such is the language applied to the Act of 1816. Together with his critical narrative of the legislation of the past, Sir Joseph has given a short but clear exposition of the theory of the precious metals. The growing importance of the question at issue is more than ample justification for this step, and there is no small gratitude due to the writer for having added to the means at the disposal of the general reader for forming a judgment upon what is admittedly a most difficult question.

ASSAYING.

Assaying. By C. H. Aaron. Parts I., II., and III. (San Francisco: Dewey Publishing Company.) Second edition.

The fact that a second edition of this work is called for proves that not a few are conscious of its value. Considering the class to whom it appeals the author has admirably acomplished the object he had in view. It has not been written for the skilled metallurgist, nor even for the student, but the subject has been so simplified as to be intelligible to those who are not deeply versed in chemistry, such as the ordinary miners. To the latter it has fulfilled a useful purpose, to such an extent even as to be almost indispensable. No symbols whatever are used, but everything is plainly stated and clearly described. We have no hesitation whatever in recommending it to ordinary workers.

SOCIETY OF ENGINEERS.—On the 5th June a visit was paid by the Society of Engineers to the South Metropolitan Gas Works, Old Kent-road, S.E. The Old Kent-road works are the original works of the South Metropolitan Gas Company, founded in the year 1834, and incorporated in 1842. In the year 1880 the Surrey Consumers' Gas Company was amalgamated with the South Metropolitan Gas Company, and in the same year the united companies absorbed the Phœnix Gaslight and Coke Company. Following this, in the year 1885, the Woolwich, Plumstead, and Charlton Consumers' Gas Company and the Woolwich Equitable Gas Company were also absorbed. The Old Kent-road works are in two separate portions—the old and the new. No extensions have been carried out here since the amalgamation of the Phœnix Company, as since that time new works have been completed at East Greenwich, which have been built and designed for the purpose of meeting the increasing demand for gas in the company's district. The other works of the company (five in number) are each situated on the river, and as a consequence coals are delivered into those works at cheaper rates than at Old Kent-road, where all the coal has to pass along the Surrey Canal. The position of the Old Kent-road works is favourable for the distribution of gas, and also for the sale of coke. The maximum manufacturing capacity is 9,000,000 cubic feet per day, equal to 900 tons of coal: producing 400 tons of coke for sale, 9000 gallons of tar and 27,000 gallons of ammoniacal liquor; these figures represent about one-fourth of the total maximum daily production of the company. All the coke produced at Old Kent-road is sold locally, the bulk of the tar is bought by tar distillers, and the ammoniacal liquor is made into sulphate of ammonia. Sulphur is recovered from the sulphuretted hydrogen produced in the manufacture of sulphate of ammonia. The company has recently reduced the price of gas to 2s. 4d per thousand cubic feet, which is the lowest at which gas is supplied either in or near London. Gas is now being supplied to the artisan class by means of a prepayment meter—and meters of this type are now being fixed at the rate of 300 per week. Consumers of this description are supplied with fittings and a cooking stove, the hire for which is included in the price they pay for the gas.

THE Old Imperial continues, says the *North Queensland Register*, with development, to carry out its earlier promise of becoming one of our payable mines. The winze connecting Nos. 1 and 2 west levels carried an average of 3½ feet of stone right down, which proves a block 80 feet by 60 feet of excellent mineralised stone. The No. 2 west level is now 75 feet in from the shaft on the same class of stone, and the leading stope over the level shows 4 feet of the same evenly good quality. In No. 2 east level the good stone gave out about 30 feet in, the stone in the present face being hardly good enough to save: but it is satisfactory to be able to record at least a face of 105 feet of good stone at the bottom of the mine. The present crushing of from 350 to 400 tons will be through in about a week, and if present indications are less than realised it must pan out for 2½ ounces, which means a 6d. dividend; 106 ounces smelted gold have already been taken off the tables, and there are 600 ounces of amalgam to be banked to-day; but this will not be retorted until the final clean up is made, when it is hoped the result will prove up to the forecast.

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LONDON: JUNE 9, 1894.

THE POLBERRO MEETING.

TO say that the Polberro meeting, held at St Agnes, on Tuesday, was a success, is scarcely a forcible enough expression. Without doubt, it was one of the most enthusiastic ever held in the history of the company. Unanimity of feeling and enthusiasm were the most prevailing sentiments. We can remember the time, and that not so very long ago, when despondency and pessimism prevailed, and when the shareholders were almost regretting they had ever consented to take a partnership in the concern. Happily, that is a thing of the past. The gloom that then seemed to overshadow the prospects has now changed to brightness, and the shareholders are now looking to the future with a wonderful degree of hope. From all accounts they have reason to be so hopeful. The position of the mine at the present moment is extremely promising. We do not desire ourselves to express any definite opinion one way or the other, but we must say we are struck with the remarkable progress that has been made of late in the right direction. At the last meeting of the company, it will be remembered, the prospects were then in a most interesting state, but now they seem to have passed that, and to have emerged into a condition of certainty. Captain CHARLES THOMAS, an expert in whose honesty and ability we have the greatest faith described a state of affairs so promising as to fairly take the meeting by surprise. He still adheres to the opinion he formed some time ago that the property is a very valuable one. Since the last meeting 15 fathoms have been driven in the 26 east where the lode has greatly improved, and where it is 6 feet wide. He described it as a beautiful character lode, and he believes that furthed discoveries will be made in the east direction. This is not all. The great point in the mine has been the driving of the 26 cross cut north. Here a great deal of work has been done, but the most important and significant has been the intersection during the last fortnight of the South House lode. At least, he is not quite certain that it is this lode, but he has very little doubt of it. It is fully 5 feet wide, and samples from it have yielded 36 lbs. of tin to the ton. No wonder this statement was received with loud applause, for, in the words of Mr. THOMAS, "it speaks for itself." Another hopeful feature is the fact that the Pink lode is underlying 16 feet in the perpendicular, and these branches will, after further sinking, be continually falling on the lode. Captain THOMAS has never known a similar case to fail, and he looks upon this as a certainty. Mr. HANCOCK likewise dwelt much upon its significance. His opinion is—and always has been, he took care to add—that at the junction of the Pink lode with the South House lode and Chappell's downright lode, immense quantities of tin will be found. Mr. VIVIAN endorsed this—in fact, the whole meeting looked to this junction as a certainty, and prophesied from it great benefit to the company. We cannot do other than commend those responsible for their vigorous working. No doubt, in this lies the secret of the success up to the present, and we hope it will not miss the prosperity that looms in the future.

Our readers are aware that of late we have been drawing attention in one or two leading articles to the present position of the home mining industry, and in them we have touched upon the Cost-book system, which is regarded with so much affection in the county of Cornwall. Against it we have nothing to say. We do not express ourselves deeply in love with it. It has its defects, no one will dispute. It is as liable to abuse as any other system of finance. In the case of the Polberro Company there is nothing to find fault with. In the cash system adopted here we observe no defects. To this we have had occasion more than once to draw attention. We congratulate Mr. REYNOLDS and the committee on the manner in which the accounts are kept, and the cash system of payment they have so admirably and beneficially adopted; nor is it necessary to reiterate the hope we have so often expressed that many others would follow the example here set them. If they would, no doubt many causes of complaint would be amended, and very likely it would in great measure remove that aloofness with which Cornish mining is regarded. It is, indeed, a satisfactory state of affairs where there are no outstandings calls. It is demonstratable evidence of the feeling with which the shareholders regard the future of the concern in which they have embarked their capital. Indeed, from every point of view, the Polberro Company is in a sound position. It is unfortunate that at such a period the price of tin should be so depressed. Of course, this is an obstacle which must be regarded in a spirit of patient philosophy. The Polberro adventurers, like everyone else, can only wait and hope. We trust, for many reasons, they will not have to exercise their patience long.

GOLD MINING IN NEW ZEALAND.

A FEW weeks ago we took the opportunity of drawing attention to the mining industry in New Zealand; to its hopeful prospects; and to some of the anomalies that exist. In the article in question we touched but lightly upon gold mining, but we said sufficient to show how greatly the prosperity of the colony depends upon it. We now seize the occasion of dwelling upon it at greater length, in order that we might not only give it the impetus of which it is in need, but complete the information to which we then slightly alluded. The quantity of gold obtained during 1892–3, as taken from the returns of gold entered for exportation, was 228,659 ounces representing a value of £917,467. The return for the former year was 276,535 ounces, representing a value of £1,107,177 But of this gold a large quantity was held by the banks in the Middle Island pending the abolition of the gold duty, which took effect from the 1st April, 1891. As compared with 1889-90, which was 201,760 ounces, valued at £803,174, the return for 1892 shows an increase of 26,899 ounces, valued at £114,293. Of the gold produced in the latter year the Auckland district contributed about 17·95 per cent.; West Coast, 44·45 per cent.; Otago, 35·04 per cent.; and Nelson and Marlborough, 2·56 per cent. It will be seen, therefore, that nearly one-half of the gold is obtained on the West Coast of the Middle Island. The total yield of the gold from each of these districts in 1892 was:—Auckland, 41,052 ounces; Marlborough, 3055 ounces; Nelson, 2792 ounces; West Coast, 101,636 ounces; and Otago, 80,124 ounces. According to the returns furnished to the Mines Department, the number of mines employed in gold mining in the different districts was 12,197, whilst the number for 1891 was 12,724, which shows a decrease in the number last year of 527. This decrease has been from the Marlborough district, 118; Nelson, 188; Westland, 248; and Auckland, 1; while there has been an increase in the Otago district of 28. Taking the value of the gold exported in 1892—viz., £917,467, it shows the average earnings of the miners to be £75 4s. 5d. a man per annum, while the earnings for the previous year amounted to £80 12s., which shows a decrease of £5 8s. 7d. To take the different districts, with the number of miners employed in each, and the value of the gold obtained, the earnings of the miners

would be as follows:—Auckland, £116 2s. 6d.; Marlborough, £49 14s. 6d.; Nelson, £52 10s. 4d.; West Coast, £77 10s. 3d.; and in Otago, £63 5s. 9d. per man per annum. In this colony auriferous quartz lodes is the most prominent branch of gold mining. According to the furnished returns for 1892, in Auckland district there were 95,931 tons of quartz and 23,719 tons of tailings crushed, which yielded 47,189 ounces of gold, representing a value of £123,872, and 44,189 ounces of bullion, having a value of £63,300; also ore to the value of £2222 was sold, making the total value of the product £189,394. In the Marlborough district 950 tons of quartz were crushed, yielding 112 ounces of gold, representing a value of £448. In the Nelson district 5547 tons of quartz were crushed, yielding 1097 ounces of gold, representing a value of £4388. In the West Coast district 49,036 tons of quartz and tailings were crushed, which yielded 27,019 ounces of gold, representing a value of about £105,000; and in the Otago district there were 10,637 tons of quartz and tailings crushed which yielded 5263 ounces, of a value of £21,052; representing a total of 184,820 tons of ore crushed and tailings treated, the whole yielding 80,680 ounces of gold, and 44,189 ounces of bullion, which, together with the value of the ore sold—£2222—has a gross value of £320,282. As for alluvial mining, under which head is included hydraulic-sluicing and dredging, both on the West Coast of the Middle Island and in Otago there are large deposits of auriferous drifts, which can be made to give very good returns for working wherever a good supply of water is available Over 32 years have passed since gold was first discovered in the alluvial drifts, and only a comparatively small area of ground has yet been worked. As year by year passes by fresh ground is being opened up wherever water can be made available. A great deal may yet be done in the conservation of water, as we have previously pointed out, and the number of men who can be employed profitably on the gold fields in working the alluvial drifts is only limited by the quantity of water available for carrying on hydraulic-sluicing operations, and the mechanical appliances for working the drifts. Alluvial mining in the early days required no expensive outfit to make it a profitable undertaking. The different creek-beds, which had been the natural ground sluices of the country, only required cleaning up, as the sand, gravel, and soil that for many ages had been regularly washed away by freshes and floods, left the heavy metallic particles lying on the beaches, and in the crevices of the rocks in the beds of the streams, requiring only to be collected and gathered together by the hand of man. But now these well-known shallow placers or workings are getting exhausted, and large streams of water have to be conveyed in artificial ditches for long distances, in order to sluice away the ground in the same manner as was done by natural causes before gold was discovered. These artificial works require in many instances a considerable amount of capital to be expended upon them before alluvial mining speculations can reasonably be expected to return interest on the money invested.

NOTES AND COMMENTS.

THE directors of the West Australian Gold Fields (Limited) have issued to the shareholders a highly encouraging circular, which, for the information of our readers, we publish in the first pages of this issue. It is headed "Circular No. 1," which implies, of course, as the directors themselves promise, that others will follow from time to time, detailing the progress that has been made. We cannot too forcibly commend this practice. It is one deserving of every encouragement, and it is one of the most likely to remove the numerous complaints which shareholders—in many cases only too justly—direct against the boards of mining companies. The witholding of information is, to use the mildest term, imprudent, and it frequently leads to the natural inference that there is nothing of a promising nature to circulate. The natural inference to be inferred from this circular is that a dividend or dividends, may be expected, and that, too, in the not very distant future. This circular naturally brings us to the consideration of what is doing in Western Australia, and whether the promises of early discoveries are being fulfilled. The news received by this week's mail certainly confirm this. There is no abatement of the excitement to which the richness of the finds have given birth. A well-known mining expert, who has just been to Australia and returned this week, has formed a very high opinion of the Coolgardie gold field. He has no doubt it is a permanent field, and that when the water difficulty is overcome it will more than fulfil its early promises.

CONSIDERING the promising discoveries of gold that have been made in Matabeleland, it is not surprising that a company has been formed for the purpose of acquiring mining and other rights there. Mining companies are formed on the slightest provocation. We are only to be told that a nugget has been found in such and such an outlandish place, when an immediate appeal is made to the public to furnish capital for the exploitation and development of the place, ofttimes with the result that rubbish alone is found. Matabeleland, however, is a veritable paradise for the prospector, and the St. Helen's Development Syndicate (Limited)—for that is the name of the new company—will very likely come across some promising claims. The capital will be £100,000, but it is not intended to raise more than £50,000 at present, of which only 5s. per share will be payable on application, the remainder being called up as required for the purposes of the company. The directors—who are all influential gentlemen—and consulting engineers—the latter being the high-class firm of Messrs. Bainbridge, Seymour, and Company—will have no fixed remuneration, but the former will receive 10 per cent., and the latter 5 per cent. of the net profits. The Articles of Association provide that if the directors guarantee a subscription of £15,000 of the capital they shall have the right to subscribe at par for an equal amount of the remaining uncalled capital. The services of Mr. F. G. Shaw, Assoc. M.Inst., C.E., F.G.S., &c., have been secured as resident engineer in South Africa, his remuneration to depend chiefly on the profitable results of his work. One commendable feature of the undertaking is that no promotion money has been or will be paid. Besides Matabeleland, the company will seek for properties in other parts of Africa, and will procure the necessary capital for their development.

THE frequent applause with which the speech of Mr. Bayliss at Thursday's meeting of the Montana Mining Company was accompanied will be easily understood on reference to the matter it conveyed. A more satisfactory speech from beginning to end it would be difficult to imagine. It was a record of works vigorously directed towards the improvement of the position of the company, and successful beyond anticipation. Fortune, over which man can have little, if any, control, has happily seconded the efforts of Mr. Bayliss and his colleagues. Had it not been for the timely discovery of the New Castletown lode there might have been a different tale to tell This accomplished, everything else in connection with the company brightens as a matter of course. Even with an unfortunate lawsuit hanging over them, the company are able to make a roseate estimate of the future, in view of the large output of valuable ore quoted in the returns. Figures are said to lie unutterably, but it is difficult to imagine how those of the Montana Company could be twisted to an unfavourable complexion. There is the increase in the average value of the ore treated, which of itself is conclusive evidence of the improvement in the whole position of affairs. There is the fact that, whereas but a very short while ago the mine was being worked at a considerable loss, there is now a large profit accumulating. What was not long ago a deficit at the bankers has been turned into a substantial balance. These are a few facts fundamental to the present state of the company as a mining undertaking, and they fully explain how it was the report of the directors was adopted without discussion, and a vote of thanks given with unassumed heartiness to the management. The broad hint of Mr. Bayliss that the company will shortly be among the regular dividend-payers seems likely to become a reality.

THE Mines Trust voluntarily surrendered its individuality on Tuesday last, and was accordingly absorbed into the South African Gold Trust Company. There did not seem to be any difference of opinion as to the advisability of the course proposed. Nobody held up his hand against the resolutions, and the comments were almost entirely devoid of any tone of regret or censure. The original purpose in the formation of the company was to play that watching and waiting game so conspicuously successful elsewhere. Chief among its objects was the loaning of money on Stock Exchange accounts for mining securities, but it was to go beyond this. Few, if any, direct mining operations were to be carried on. What they had proposed to do in this direction was to invest in different mining ventures in a way to average the risks inseparable from such undertakings. Broadly speaking, a policy of this sort is generally remunerative. If the directors are sharp, they can sometimes manage to make a practical application of that noble and exalted principle of "Heads I win; tails you lose." The failure, if so it may be called, of the Mines Trust to keep going succesfully alone, is attributed to the difficulty of obtaining a sufficiency of loaning business and to the difficulty of competing without a proficient organisation, with the other large companies in South Africa. Such were the causes contributing to Tuesday's self-surrender.

ACCORDING to the Johannesburg newspapers, just arrived, the May Deep Level seems in a bad way. That last is, in fact, the phrase which has been applied to the concern by the *South African Financial Record*. Descending from a general statement to a particular justification of it, this organ adds—writing on May 12th—"Without there is an immediate increase in the average yield of gold—and that is virtually out of the question—the mill will have to be closed down almost at once." Some statements written contemporaneously bear even more gloomily upon the situation. "Nothing short of a miracle," says one opinion, "can save the company from a further reconstruction." A third reconstruction would come as a bitter disappointment to the shareholders. Exaggerated hopes have in the past been formed upon the general prosperity of the Rand, and an occasional yield of unusual magnitude. It comes more and more to be recognised that the mine is not of that surpassingly brilliant capability, formerly held to be the case. The danger now is that the view taken by the investing public will be in the other extreme. It is widely believed that in places the mine will be able to yield some highly satisfactory results. The whole concern, however, can hardly fail to be considerably damaged by passing again through the fire of reconstruction.

THE Luipaards Vlei Estate and Gold Mining Company (Limited) are gradually making profits year by year. At the forthcoming meeting the directors will present what is, on the whole, a favourable report. The meeting should have been held much earlier, as the directors confess, but for reasons, which they fully explain, and which, no doubt, the shareholders will accept, it was postponed. It will be remembered this company was formed in the year 1888. For the year ending June 30th, 1890, a dividend of 6 per cent. was paid (3 per cent. in April, and 3 per cent. in October). Up to the 30th June, 1391, the accounts showed a profit on the year of £2259 10s. 4d., making a credit to profit and loss of £3338 2s., which was carried forward. The accounts to the 30th June, 1892, showed a profit of £2546 2s., adding the balance, it made £5884 4s. to the credit of profit and loss, which was likewise carried forward. The directors now report a profit on the year's working of £2262 9s. 1d., which, with the profit previously carried forward, brings the total amount to over £8000. The object of the board has been to permanently develop the value of the Bothas reef, on the Mynpacht portion of the property, but in carrying this out unavoidable delay was caused by a fault in the reef. They have, however, determined the position of the reef on the other side. To this delay they attribute the postponement of the meeting.

THE shareholders in the newly-incepted Straits Development Company are cordially in agreement as to the value of the undertaking they are engaged in carrying forward, according to the various remarks, more or less of a fragmentary nature, dropped from the body of the hall at Tuesday's meeting, and the one thing needful seems to be an able and energetic management, and this, it is satisfactory to reflect, they appear to have. There is a many-sided attribute about the concern which is always a hopeful feature. The more cards in the hand, provided there be no resultant perplexity, the more chance there must be of successfully coping with any possible combination of the circumstances by which the game is conditioned. Thus it comes that the Straits Development Company, with its timber trade and its vast mining concessions, may be able to succeed where an undertaking rigidly limited to one direction might not result so happily. As at present administered the development of the property appears likely to go on apace. Much has already been done, and what there is still to do is at present occupying the mind of the Chairman, who is at the property, and of the manager, versed in the ways of the "Heathen Chinee," recently appointed to the supervision of the operations. Such a large and difficult undertaking as the one under consideration needs to be in able hands, but, given that, its future is, generally speaking, assured.

THE circular issued to the shareholders by the secretary of the Coetzeestroom Estate and Gold Mining Company lays bare a state of things which cannot be described as other than disastrous. To give portions from it would spoil its effect, so we reproduce it in its entirety:—"On 10th May a cablegram reached us giving April crushing and cyanide work, which latter had been estimated by the manager as double that of the previous month:—360 tons crushed, 3 dwts. per ton on the plates (say, 54 ounces); 1400 tons treated by cyanide, 1 dwt. per ton (theoretically, 70 ounces, but, in fact, may be only 44 ounces standard). I need hardly say that the board at once ordered all expenditure to cease, and called the largest shareholders together to confer with them as to the future. At this meeting the full report of the Barberton agent was read, in which he confirmed his advice by cable, and estimated that to produce 'about 65 ounces of fine gold the cost had been about £11 10s. 9d. an ounce,' except for a certain amount to be allowed for cyanide in stock of solution, and it was decided to give the present manager notice terminating his management at the expiration of the necessary period. A final call of 3d. per share has been made payable on the 16th proximo, of which I enclose you the usual call notice." £11 10s. 9d. an ounce! This fact stands out prominently in the history of mining, and it is one which will be remembered for a long time to come. The shareholders who will have to suffer deserve heartfelt sympathy.

JUDGE EMDEN, writing in the "Nineteeth Century," has drawn attention to a number of flaws in the existing laws for the protection of the investor. His remarks must be regarded as highly authoritative, in view of the long experience their author has had of the working of the law in this connection. His chief objections are taken to the methods of company formation, which often are of such a character as to preordain the concern to ruin, or at least heavily to handicap it in the race for success. It seems to be generally admitted that the law as it stands is extremely defective. One has only to consult the statistics relating to public companies to gather a budget of historical information bearing weightily upon the whole industry—for that it has become—of promotion. The proportion of failures is disquietingly large. Much needless blame is lavished upon the shareholder, who is described in various terms expressive of stupidity and contempt. But it must be patent that the skilled financier and company promoter has the ordinary investor at an overwhelming advantage in the game he is playing, and to minimise these odds should be the useful work of the law. Every successive enactment has been evaded by a recourse to the most ingenious and subtle of devices. To out-generalise the tactics of the shady financier has been the task Judge Emden has set himself seriously to consider, and his comments are a strong reminder that the whole affair is one for specialists, and that the ordinary individual had much better leave it alone. It is in any case certain that reform can hardly be delayed for long.

IN an article headed "British Coal for America" the *Glasgow Herald* draws attention to the natural result of the strike in the United States. Owing to the inability to obtain bituminous coal at a fair market price, contractors and consumers have found it necessary to go to other markets for their supplies, pending the settlement of the dispute and the fall of prices down to a reasonable level again. The dislocation of trade occasioned by the strike is peculiarly unfortunate for America, for it comes on top of the partial suspension of general business relations caused by the prolonged passage of the Wilson Tariff Bill through Congress and the Senate. Quite apart from this last cause, the commercial distress is sufficiently great. Not since 1885 has New York—the very centre of the arterial system of American commerce and the great purchaser of bituminous coal—experienced such a coal famine as this—a famine so serious as to threaten not only to lead to the shutting up of its manufactories, and the partial tieing up of its railways, but the reduction of its ocean steamship service. Strikes of coal miners up and down the country have been tolerably frequent in the past, but in most of the earlier occurrences

it was the anthracite interest that was affected—that is, anthracite owners and household consumers, with here and there a few factories that depended on this coal for their power. The present dispute strikes a blow straight at the great producing and transportation concerns, nearly all of which have, during recent years, become users of soft coal only, because of its greater cheapness and its superior steam-making qualities.

THE Board of Trade Returns for May are far from encouraging, for the figures show that our foreign trade is scarcely so good as it was 12 months ago. There appears to be really no satisfactory explanation of this, except the fact that there has been a restricted demand from America for British goods. Whilst the movement of trade within the country appears to have gone on fairly satisfactorily, as shown by the maintenance of the increase in railway receipts for the carriage of goods, amounting to over 4 per cent. for May, as compared with those for last year, our shipping business, on the other hand, shows no improvement, and the volume of the country's foreign trade has somewhat diminished during the past month. The imports are valued at £34,134,060 a decrease of £2,704,153, equal to 7·3 per cent., and the exports of British and Irish produce to £17,484,212, a decrease of £338,248, equal to 1·8 per cent. The exports of foreign and colonial merchandise were £4,904,108, a decrease of £2,041,112, the re-shipment of sheep's wool being valued at only £971,747, compared with £2,749,795 in May, 1893. With the single exception of live animals, caused by the greater importations of oxen and bulls and sheep from the United States, all the various classes of imported goods are lower in value, raw materials for textile manufacturers alone being £1,579,000 below last year's total. Owing to the lateness of the issue of these returns, we are unable to give our usual statistics, but we hope to be able to issue them next week.

THE fact that nickel steel is to be used in the construction of a crank shaft for a great American liner should be good news for all who are interested in the nickel mines of Canada. Notwithstanding the vivid pictures which were painted of the uses of nickel, which was expected to come into nearly universal use in steel manufacture, from armour plates to cutlery, the world's consumption of the metal has not very greatly increased. In the United States, it is true, an experimental use of it has been made in the construction of ordnance as well as for the armouring of war vessels. The principal Canadian deposits are controlled by a syndicate comprising the leading American, English, and French steelmasters. If the use of the metal becomes at all general, we may expect to find capital being put into other mines in the Dominion.

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

A quiet week.—Prices generally dull.—Diamonds and land shares vacillate.

THE past has been a quiet and featureless week for the Mining Market. Both South African and Indian and Miscellaneous departments have been affected by a quietude which at times has almost deepened into gloom. At the commencement of the week attention was directed to Modderfontein, the news of the discovery of the Chimes Reef upon the property creating a pressing demand for the shares. Glencairns also were conspicuously active, while, in addition, Robinsons and Langlaates were widely enquired for. Beyond this there was but little in the market worthy of being chronicled. Land shares and diamonds were both lifeless. There was some small accession of activity among the higher-priced shares in the Indian department, where buyers seemed in a hurry to cover the sellings made during the preceding days. Little business of any sort was transacted on Tuesday in the South African market. Rand shares were, speaking comparatively, fairly firm, but beyond this the market remained as dull as ever. One or two enquiries for such shares as Stanhopes, Heriots, and Worcesters served rather to emphasize the lifelessness generally manifested elsewhere. May Deep were unfavourably affected by reports from over the water, rumours of reconstruction disquieting the investors in these once favoured shares, which closed 6d. down. Land and diamond shares were in a doubtful state. Jagersfontein, Chartered and Consolidated Gold Fields stood out from the general weakness at slightly improved rates. No accession of activity was exhibited in the miscellaneous department. Monday's improvement was simply maintained, but not carried further. There was no change in the South African market throughout Wednesday. Kaffir shares, affected by the pronounced absence of anything like a demand, ruled generally lower. One or two slight advances were registered, but no headway was made against the prevailing depression. Robinson and Nigel were the subjects of favourable enquiry, and the buoyancy here displayed went clearly to show that the smallest influences tending favourably would have sufficed for a revival. Both land and diamond shares were quite in sympathy with the rest of the market. A rally in Jagers set in against the general downward movement, which carried them $\frac{1}{16}$ to the good. Steadier prices ruled in the miscellaneous market. Weakness was, however, evidenced by one or two of the Indian securities, though the outputs announced were up to expectation. Throughout Thursday an unbroken continuity of dulness was preserved in all the departments of the market, diamonds excepted. These latter improved—De Beers to 16¾ and Jagers to 14¾. For the rest the depression was far-reaching, and, with the single exception already noted, there were no features worthy of especial mention.

British Mines.

The Cornish market has been dull, and there are no very important changes to note. Although the run at Dolcoath has not yet been cleared the shares are firmer 71¼. At the Polberro meeting last Monday a call of 1s. per share (£1250) was made. The prospects of the mine are said to be excellent. Risen: Blue Hills, 2s. 6d.; Dolcoath, 20s.; West Kitty, 5s.; and Wheal Kitty, 1s. 3d. Fallen: Carn Brea, 10s.; Cook's Kitchen, 2s. 6d.; Killifreth, 2s. 6d.; and Tincroft, 5s.

South African Shares.

The week opened fairly well for South African shares, in which department of the market there was some activity. Glencairns and Modderfonteins were especially strong and buoyant. Early in the day the former shares were depressed owing to a report from the other side that the company's supply of tailings was exhausted, and that the management had been unable to keep the whole of the reduction plant in operation. Buyers, however, came in quickly, and the price rapidly advanced to 36s. 6d., and closed 3s. up on the day. Modderfontein rapidly rose on the report, generally circulated, but not officially confirmed, that the Chimes Reef had been cut upon the company's property. Large buying orders were completed early in the morning and the price, after reaching 20s. 6d., closed at 19s., a gain of 4s. 3d. on the day. In anticipation of a favourable return for May, Robinson remained firm, and at the close a gain of ¼ to 6 17-32 was registered. Crown Reef rose ⅛ to 9 7/16, and Langlaagte went up a similar extent to 4 21-32, while Simmer and Jack advance 3-32 to 7¼. Rallies of minor importance also occurred in Gold Fields of Mashonaland, Henry Nourse, Pioneer, Princess, and Worcester. Randfontein, after being bought at 17s. 3d., relapsed to 16s. 10½d. sellers. Paarl Central and Champ d'Or were each somewhat higher, and Alexandra Estate and Main Deep Level were asked for, and slightly firmer. A reaction of $\frac{1}{16}$ occurred in City and Suburban, Salisbury, and Wemmer, East Rand being easier at 13s. 9d. There was but little activity in the Land department, small relapses occurring in both Chartered and Becks. Diamond shares were also flat. Jagers fell ¼ and De Beers $\frac{1}{16}$ in sympathy. On Tuesday the South African market was not so active as on the preceding day. Firmness, though in a lesser degree, was still the characteristic of the Rand shares. There was an especial demand for Stanhopes, Heriots, Worcesters, and Rand Mines, while smaller advances occurred in Champ d'Or, Salisbury, Wolhuter, Luipaard's Vlei, Paarl Central, and Transvaal Gold. Recessions of $\frac{1}{16}$ took place in Robinsons, Primroses, Glencairns, Pioneers, Rietfonteins, Simmers, and Wemmers. The contemplated reconstruction of the May Deep Company has tended to weaken the shares. Champ d'Or Deep and Modderfontein were also easier. An uncertain tone manifested itself in land and diamond shares. Chartered were stronger at 34s. 6d., but Bechs were 6d. down at 31s. 3d. De Beers fell on Paris selling, and closed $\frac{1}{16}$ lower on the day. Jagers, however, did not display any movement whatever. Business generally was dull on Wednesday, many of the members being absent. Despite the insignificance of the operations conducted in Rand shares a fairly steady tone was maintained, there being even in some cases an advance upon the quotations of the preceding day. Robinson and Nigel were the most conspicuous shares upon the upward movement. Paris support occasioned a favourable demand for the former, which rose 3-32 to 6 19-32. Nigel were widely in request on an increased yield of 1000 ounces. The uncertain and variable nature of the reef, however, confined the advance to $\frac{1}{16}$, the shares closing at 2¾. The announcement of an improved yield also exerted a favourable influence upon Champ d'Or. Among the other shares which bettered were Randfontein, Henry Nourse, and East Rand. Relapses occurred in Transvaal Gold, New Aurora West, May Consolidated, and Geldenhuis Main Reef. The tone in the land market was very uncertain. Bechuanaland Exploration were slightly firmer at 31s. 6d. Chartered, on the contrary, fell 3d. to 34s. 3d. Diamond shares were very dubious in their tendencies. Having relapsed to some small degree, they recovered, but did not rise to any extent. De Beers were at one time 16¼, but they closed $\frac{1}{16}$ higher. Jagers improved $\frac{3}{16}$ to 14 13/16. The dullness noticeable in this department of the market throughout the preceding days continued unbroken on Thursday. Hardly one noticeable feature disturbed the calm overspreading the market. Rand shares in some instances gave way to the prevailing depression, and some declines were registered. There were, however, some few enquiries in certain directions, and these were productive of an occasional rise. Chief among these were Pioneer, which advanced ⅛ to 3⅜, and Champ d'Or, which rose 3-32 to 1 25-32. United Langlaagte exhibited a harder tone, being quoted 1s. higher at 16s. 6d., and Moodie fully-paid rose 1s. to 9s. 6d. Enquiries were also made for Langlaagte, Simmer and Jack, Village Main Reef, and Worcester, the advances ranging from 1-32 to $\frac{1}{16}$. Randfontein were somewhat stronger at 17s. 6d. Modderfontein, on the contrary, relapsed 6d. to 17s. Recessions of $\frac{1}{16}$ occurred in Gold Fields of Mashonaland, Kleinfontein, Meyer and Charlton, Stanhope, Transvaal Gold, and Langlaagte Royal. East Rand relapsed to 14s., Geldenhuis Main Reef were down 1s. at 10s., Knight declined 6d. to 15s. 9d., and Princess and Paarl Central were offered. Lisbon-Berlyn fell to 3s. Among Land shares there was also a somewhat depressed tone. Chartered were the exception to the general weakness, and these remained steady at 34s. 3d. No improvement in the tone of the market has been noticeable throughout to-day. Kaffirs, Diamonds, and Land shares—all have been lifeless. Beyond the rise of Southern Land shares to 13s., the market has been absolutely featureless.—Risen: African Gold Recovery, 1s. 3d.; Buffelsdoorn, 1s.; Champ d'Or, 3s. 9d.; Glencairn, 1s. 6d.; Henry Nourse, 1s. 3d.; Heriot, 2s. 6d.; Langlaagte, 5s.; Luipaards Vlei, 6d.; Metropolitan, 1s. 3d.; Modderfontein, 2s.; Moodies, 1s.; Princes, 2s.; Randfontein, 6d.; Robinson, 5s.; Simmer and Jack, 2s. 6d.; Southern Land (15s. paid), 3s.; ditto (fully paid), 3s.; Stanhope, 3s. 9d.; Witwaters (Knight's), 6d.—Fallen: Bechuanaland, 6d.; Block B, 1s.; Central Africa (Zoutpansberg), 6d.; Chartered, 1s. 6d.; Consolidated Gold Fields, 2s. 6d.; City and Suburban, 7s. 6d.; Crown, 5s.; De Beers, 10s.; Exploring, 2s. 6d.; Ferreira, 2s. 6d.; Geldenhuis Main Reef, 1s. 6d.; Kleinfontein, 1s. 3d.; Main Reef, 1s. 3d.; May, 6d.; ditto Deep, 1s.; New Chimes, 1s. 3d.; ditto Jagers, 10s.; Oceana Development, 1s. 3d.; ditto Land, 1s. 3d.; Sheba, 2s.; South Simmer and Jack, 2s. 6d.; United Roodepoort, 2s. 6d.; Wemmer, 5s.

Indian and Miscellaneous Shares.

This market opened remarkably firm on Monday, the higher priced shares being especially active. In the Indian market there was a distinctly better tendency, the sellings of last week being again covered. Champion Reef, Mysore Gold, Nundydroog, and Ooregum ordinary and preference were each $\frac{1}{16}$ better. On the other hand Wentworth ordinary declined to 4s. 6d., and Harquahala remained dull at 11s. offered on unfavourable rumours. Rio Tinto were $\frac{7}{16}$ lower at 13 3/16. In contradistinction to the South African shares, the Indian and Miscellaneous market continued buoyant and active on Tuesday. Advances took place in Kapanga and Mysore Harnhalli, and there seemed every likelihood of the movement spreading. Day Dawn Block, also, were firmer on the day's business. On the other hand, Gold Fields of Mysore, South-East Mysore, and Gravel Gold were lower. A decided weakness manifested itself in Rio Tinto shares, which declined $\frac{1}{16}$ to 13⅜. Cape Copper fell $\frac{1}{16}$ in sympathy. Throughout Wednesday the Indian and Miscellaneous market was somewhat quieter than it had been on the two preceding days, the tone, however, remaining fairly firm. Mount Morgan rose ⅛ to 2 1/16, while De Lamar, Elkhorn and Montana all rallied to some extent. A decline of 1s. occurred in Don Pedro, while Kapanga and Wentworth Priority were slightly lower. The announcement of the Indian returns, which, with one exception, fully came up to anticipation, brought about some accession of strength to this department of the market. Mysore and Mysore Reefs were rather flatter. South-East Mysore were more largely in demand upon a satisfactory mining report. In other directions the better tone was distinctly perceptible. Among the shares which improved were De Lamar, Elkhorn, and Mount Morgan. In copper shares a recovery of ⅛ took place to 13¾. Cape Copper, on the contrary, remained dull. Copiapo improved $\frac{1}{16}$. The Indian and Miscellaneous market remained quite in keeping with the South African market in its dullness on Thursday. Indian shares were very quiet. Ooregum ordinary fell ⅛ to 4 1/16, Nundydroog 1s. to 25s. 6d., and Champion Reef $\frac{1}{16}$ to 4. St. John del Rey recovered 6d. to 23s. 6d., but Jay Hawk and Elkhorn were rather weaker. Rio Tinto advanced $\frac{1}{16}$ to 13 3/16. Risen: Alaska, 5s.; Baker's Creek, 2s. 6d.; Bayley's Reward, 1s.; Brilliant, 1s.; Brilliant St. George, 2s.; Day Dawn Block, 9d.; De Lamar, 1s.; Elkhorn, 6d.; Golden Feather, 6d.; Golden Gate (California), 6d.; Kapanga, 1s. 6d.; Libiola, 2s. 6d.; Montana, 6d.; Mysore Harnhalli, 6d.; Mysore Reefs, 1s. 6d.; Ooregum Preference, 1s. 3d.; South East Mysore, 9d.; Tolima A, 5s.—Fallen: Aladdin, 2s. 6d.; Cape Copper, 1s. 3d.; Coromandel, 3s.; Don Pedro, 6d.; Golden Gate (Queensland), 6d.; Gravel Gold, 6d.; Harquahala, 1s.; Ooregum, 1s. 3d.; Pahang Corporation, 6d.; Poorman, 6d.; Rio Tinto, 16s. 3d.; Tharsis, 2s. 6d.; Wentworth Proprietary, 1s. 3d.; ditto Ordinary, 1s. There has been little activity in the Indian and Miscellaneous market during to-day. Kapanga had a sudden rise to 3s. on favourable reports from the mine, while, on the other hand, Lisbons suffered a slight reaction. Indian and Copper shares have exhibited no favourable tendency.

SETTLING DAYS.

(Ticket Days.)	JUNE.	(Account Days.)
Wednesday, June 13.		Thursday, June 14.
Wednesday, June 27.		Thursday, June 28.

CONSOLS SETTLING DAY.
Wednesday, July 4.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

BAKER'S CREEK GOLD.—The directors have received cable advice from Adelaide that a further dividend of 1s. per share has been declared, payable there on the 20th inst.

BALAGHAT-MYSORE.—The directors have received a telegram from Captain Jos. Pryor, giving the return of gold for the month of May as follows:—"360 tons of quartz crushed, produced 506 ounces of gold."

BONNIE DUNDEE.—The directors have received the following cablegram from the managing director in Charters Towers:—"Have crushed 157 tons of quartz for a yield of 150 ounces of gold. The approximate value of this return is £500."

BAYLEY'S REWARD.—The following cablegram, dated 7th inst., has been received by this company's London office:—"This week's run has been 600 ounces gold. We are employing five stamps. Ore at grass yielding above Begelhole's estimate. Work has been resumed 220 feet level; good gold Everard Cockshott shafts, all stopes yielding well. Estimate of ore reserves at grass 4000 tons."

CITY AND SUBURBAN.—Result of last month's crushing 2404 ounces battery.

CAYLLOMA.—A cable has been received from the mines, advising May production 14,750 ounces fine in ore shipped; 72,500 ounces fine in bullion.

CROWN REEF.—Results for May: Yield in smelted gold from 120 stamp mill, 6485 ounces; yield in smelted gold from 120 stamp cyanide works, treating tailings and concentrates produced by the mill, 1979 ounces; yield in smelted gold from old cyanide works treating accumulated stock of tailings and slimes, 1544 ounces; total, 10,008 ounces.

DE LAMAR.—Issued capital £400,000. The following is the cabled return for the month of May:—"Crushed during the month 2979 tons, bullion produced in the mill $60,718, estimated value of ore shipped to smelters $6000, miscellaneous revenue $625, total revenue $67,343, total expenses $32,960, profit for the month (or at $4·90 to £ sterling £7016) $34,383."

DURBAN-ROODEPOORT.—The following results for May have been received by cable:—"Quartz milled, 6625 tons, 70 stamps, 27 days, 3271 ounces. Tailings treated, 8640 tons, 28 days, 2067 ounces. Total, 5338 ounces."

EAST RAND PROPRIETARY.—The secretary of the Anglo-French Exploration Company (Limited), the London agents of the East Rand Proprietary Mines (Limited), has received a cable from Johannesburg to the effect that during the last month the 10-stamp mill of the New Blue Sky Company, in which the East Rand Company holds a predominating interest, crushed 800 tons, which yielded 540 ounces. 10 tons on concentrates, assaying 6 ounces per ton. 492 tons of tailings treated yielding 114 ounces.

ELKHORN.—The following is the cabled return for the month of May:—Mill worked 29 days and crushed 1176 tons. Bullion produced in the mill, $26,035; 186 tons of smelting ore sold, $13,343; total produce, $39,378; total expenses, $22,614; estimated profit for the month, $16,764; or at $4·85 to £ sterling, £3,456. The directors have declared an interim dividend of 9d. per share (free of income tax) for the quarter ending May 31.

ELKHORN.—"Bullion produced in the mill for the week ending June 2, 8300 ounces."

FORBES REEF.—A telegram has been received from the mines to-day stating that the result for the month of May is 277 ounces of gold.

GELDENHUIS MAIN REEF.—Result of last months crushing, 450 ounces cyanide, 780 ounces mill.

GLENROCK.—Premier Mine: The latest mail advices received from the property state:—"We are fast approaching to where McKenzie's shoot should be in the low level adit. It is certain to be met with within 200 feet from where we are to-day, and possibly much sooner. Once we have this, and it is at all rich, prospects will quickly improve.—Cyanide Works: I want you thoroughly to understand that we shall only clean up at these works about once in three months, as the clean up is expensive, and it would be better to allow the gold to accumulate before incurring this expense. Mr. Farrell has arrived at the mine, and thoroughly inspected it."

HARRIETVILLE.—The following telegram has been received from the mine, dated June 2, giving the result obtained during the past month:—"500 tons, 130 ounces."

KAPANGA.—The directors have received the following telegram from the manager (Captain Argall):—"Am glad to inform you that the reef shows traces of gold in the bottom of the shaft. I consider the prospects most favourable.—Coromandel: The yield from 1½ ton has been 21 ounces. At the present time

I estimate the yield at 10 ounces per ton. The vein has all the appearance of being permanent. Tributers are getting rich ore from other part of the mine."

JAY HAWK AND LONE PINE CONSOLIDATED.—The directors have received the following telegram from the manager, viz.:—"Estimated mill return last week, 7000 ounces. Bonanza shaft has reached a depth of 112 feet. Looking first-rate."

JUBILEE.—The result of last month's crushing of 3159 tons yielded 1624 ounces, and from tailings 205 ounces of gold.

LANGLAAGTE ROYAL.—Production for May 4413 ounces. Nett profit £5600.

LAS CABESSES MANGANESE.—Production for the week ending June 2 (five working days) 325 tons, or a daily average of 65 tons.

LISBON-BERLYN.—The following results for the month of May have been cabled:—"Tailings treated by cyanide, 1400 tons (of 2000 lbs.); recovered, 595 ounces; milled, 700 tons (of 2000 lbs.); recovered, 86 ounces; total recovered, 681 ounces. Plates not scraped. Development: Theta progressing satisfactorily. We have driven during past month 250 feet."

MAY CONSOLIDATED.—The following cable message, dated Johannesburg, 5th inst., has been received at this office:—"The yield of gold during the past month (May) was 2055 ounces from 5550 tons crushed. Mill running 29 days."

MEYER AND CHARLTON.—Crushed during May 3785 tons. Obtained 2176 ounces of gold; 252 ounces also recovered from tailings (first three weeks of treatment by own cyanide works). Total 2428 ounces. Estimated profit £3580.

MESQUITAL DEL ORO.—The following cablegram, giving the result of the May mill-run, has been received from the mine:—"Fifty stamps ran 622 hours (25 days 22 hours); quantity of ore crushed 2912 tons; bullion produced at clean-up 1081 ounces; value about £3818. Have also remitted cooper bar value about £42."

MONTANA.—By cablegram from the mine, the directors are informed that the total output for May was—gold, 2700 ounces; and silver, 21,650 ounces. The estimated realisable value of the same is $67,000. The tonnage of ore milled during the month was 6340 tons, 110 stamps having been in operation. The expenditure was as follows:—Working expenses on revenue account, $36,300; outlay on developments, $12,000; extraneous expenses including insurance, $1550; on permanent improvements account, $1700 = $15,250. Total, $51,550.

MOUNT ZEEHAN (Tasmania).—The following telegram has been received, dated Hobart, 5th inst.:—"Have milled 275 tons in 14 days, return 46¼ tons of lead and 4650 ounces silver Shipped per s.s. *Pyrenees* 70 tons."

MYSORE.—The directors have received a telegram from Mr. R. Hancock, giving the return of gold for the month of May as follows:—"5096 tons of quartz crushed produced 3451 ounces, also 697 ounces were obtained from tailings, making together a total production of 4148 ounces of gold."

MYSORE REEFS GOLD.—The following telegram has been received, dated June 2, from Captain Scantlebury:—"Underlie shaft, 250 north of the shaft, width of the lode 3 feet 3 inches, assaying 1 ounce per ton. Vertical shaft, 200 south, width of lode 1 foot 6 inches, assaying 6 ounces per ton."

NIGEL.—Last month's crushing yielded 2501 ounces battery, 2133 ounces cyanide.

NEW CLEWER ESTATE.—Results for May:—From mill working 28 days, crushed 1870 tons, yielding 761 ounces of gold. From cyanide works, treated 1940 tons, yielding 1019 ounces of gold. Total yield 1780 ounces of gold. Total value £4441.

NEW CHIMES.—Result of last month's crushing yielded 247 ounces of gold.

NEW HERIOT.—Last month's crushing yielded 4022 ounces.

NUNDYDROOG.—The directors have received a telegram from Mr. Grey giving the return of gold for the month of May as follows:—"2440 tons of quartz crushed, produced 1583 ounces, also 137 ounces were obtained from tailings, making together a total production of 1720 ounces of gold."

ORION.—Result of last month's crushing yielded 3050 ounces of gold—1300 ounces from plates, and 1750 ounces from cyanide.

PAARL CENTRAL.—A cablegram has been received from the head office at Johannesburg, stating the results for last month (May):—"Mill: Crushed 4350 tons, yielding 1965 ounces of gold. Cyanide Works: Treated 2940 tons, yielding 625 ounces of gold = 2590 ounces of gold. Total value, £9000."

SAN SALVADOR SPANISH IRON ORE.—The s.s. *Koperasie* sailed from Santander on the 3rd instant, with a cargo of this company's ore for Middlesbrough.

SHEBA.—The following cablegram has been received from the general manager for the month of May:—"2220 tons of Sheba ore crushed, yield 1930 ounces; 2200 tons of Annie's Fortune ore crushed, yield 1120 ounces; 6000 tons of tailings treated, yield 3185 ounces; 81 tons of concentrates, assay value 511 ounces; total, 6746 ounces."

SPRINGDALE.—A cable has been received, under date June 8, from the manager of the mine, reporting that 185 tons milling ore (extracted) 9 tons, shipped to smelters, yielded $960 (averaging over $106 per ton). The main shaft at the Mountain Lion Mine is 305 feet down, and levels have been driven 85 feet.

STANHOPE.—Result of last month's crushing:—970 ounces battery, 610 ounces cyanide. Number of tons crushed, 2000. Approximate expenses, £3000; approximate profits, £2250.

TOLIMA.—The following cablegram has been received from our mines:—"Estimated profit for May over £2500. 140 east end worth now £180 per fathom. Tons produced 170. In the above return silver is valued at 29d. per ounce."

TWIN LAKES PLACERS.—The managing director reports that during the month of May 100,000 cubic yards of gravel were washed, and $1900 cleaned up from a flume under repair. The first regular clean up is expected to be made during the current month.

UNITED IVY REEF during last month produced 208 ounces and 112 ounces from the tailings, making a total for the month of 320 ounces.

UNITED MEXICAN.—San Cayetano: Gross returns for week ending May 26, $1590; expenses, $1720. Loss, $130.—El Cubo: Gross returns, $9725; expenses, $6070. Profit, $3655.

VAN RYN ESTATE.—Cable dated June 4:—"Result of 29 days' working, Van Ryn, 40 stamps, 1473 ounces from 3500 tons."

VICTORIA GOLD MINING ASSOCIATION.—The fortnightly crushing has been cabled as follows:—"255 tons crushed yielded 460 ounces gold."

WORCESTER EXPLORATION.—Result of last month's crushing yielded 2634 ounces of gold.

ZEEHAN-MONTANA.—The following telegram has been received, dated Hobart, 5th inst.:—"Have shipped per s.s. *Pyrenees* 55 tons, containing about 40 tons lead and 5500 ounces of silver."

GEOLOGY AND MINERALOGY OF SHASTA COUNTY.

By HAROLD W. FAIRBANKS, F.G.S.A.
From the Californian State Mineralogist.

VIII.

(*Continued from page* 608.)

ARGILLITIC rocks, frequently containing fossils, occur along the trail which leads up the river to Campbell's place, eight miles above. There is much similarity both in the character of the strata and in the fossils. Dykes of diorite and strata of quartzose and of feldspathic composition separate the fossiliferous beds. The rocks are in great part metamorphic, but the bedding is not prominent. The slaty rocks strike north 20° to 60° west, and dip from 30° north-east to vertical. Thin beds of limestone are associated with these rocks, but they do not carry fossils.

The limestone peaks along the east side of the McCloud River extend in a north and south direction, but the strike of the formation is generally north-west and south-east. The repetition of the limestone bodies in a north and south direction, as well as that of the fossiliferous beds along the river, is undoubtedly due to sharp folding or faulting, whereby the same strata are repeated several times. If this were not so the thickness of the limestone would be immense. The limestone mountains were climbed south of Campbell's and found to be underlaid and cut up by dykes and diabasic rock. Radial arms of limestone extend down the mountain from the main ridge in every direction, and are often entirely isolated by the intrusive rock. At one place a purplish, faintly porphyritic rock underlies the limestone. It, with some other rocks much jointed and shivered by dynamical action, seems to have been left adhering to the limestone when it was caught in the intrusive masses. Considerable

Local Variation

exists in the strike and dip of the limestone; dip from nearly level to a high angle to the north-east. Fossils are reported to be abundant on the mountains two miles south of Campbell's, but the locality could not be found.

The formation is well exposed along Campbell's Creek. It appears to be pseudo-diorite and other highly metamorphosed rocks. These rocks extend to the divide on the east, slates not appearing till Squaw Creek is reached. One mile east of Campbell's the slates strike north 50° west, dip 45° north-east.

The McCloud through the greater part of its course flows with a swift current between steep and often rugged, but not precipitous, mountains, with scarcely any bottom land. Timber is not abundant on the mountains, and what there is is largely oak. About a mile above Campbell's the course of the limestone carries it across the river. It appears in detached bodies for some distance up to this point. West of the river it rises in a high ridge for several miles, then in a second one, while on the east side of the river opposite, and about six miles above Campbell's, are other high limestone peaks. The country rock continues to be a greenstone to a large extent, often certainly of sedimentary origin.

About nine miles from Campbell's, on the north side of the river, the limestone occurs in thin strata, alternating with hard green or purplish rocks; dip 55° north-east. On the south side the dip is half that. It is overlaid by conglomerates, quartzites, and other granular semi-crystalline rocks. Underneath are argillaceous rocks, filled with imprints of branching forms (bryozoa). This is

The Last of the Limestones

on the McCloud. The beds extend off in a north-west direction towards the head of Hazel Creek. On the divide they form a high mountain rising fully 6000 feet: 12 miles north of Campbell's the rocks are chiefly greenish to purplish conglomerates, very hard and compact.

East as far as the divide separating the McCloud from Squaw Creek, there is much hard metamorphic rock, with quartzites and greenish semi-crystalline, fragmental rocks, together with some probably intrusive. In the hills just south of the river, 12 miles above Campbell's, there is an outcrop of dark calcareous argillite, rich in fossils. The strata dip to the east 30° and strike a little west of north. They are about three miles east of the limestone. The fossils are probably carboniferous. Rocks similar to these described outcrop along the river to the north of Chatterdown Creek. Up the creek appear green conglomerates, slates, diorites, and thin-bedded quartzites. The latter occur in very regular strata, a few inches to a foot thick, with thin, soft argillitic layers between; strike north 40° west, dip 65° north-east. Eastward appears a green rock, often fully crystalline, often conglomeritic with pebbles of eruptive rocks, porphyries, and porphyrites, sometimes amygdaloidal. Judging from the pebbles in the creek, black slates must outcrop towards the head of the creek. The great mass of the rocks are semi to fully crystalline, and generally massive. This is a very interesting field for the study of metamorphism. Nothing certain can be said until a microscopic examination has been made. It is certain that there are some intrusive rocks in this region, but the origin of most of the massives is in doubt.

Petrosilex

is another common rock. One mile south of the mouth of Chatterdown Creek is a purplish porphyritic rock. Fossils are reported from limestone at the head of Chatterdown Creek, but the locality was not visited. The McCloud has an elevation of 1300 feet at the mouth of Chatterdown Creek The mountains rise about 2000 feet more, with occasionally higher peaks. The mountains are very brushy, and it is almost impossible to travel over them, except on the trails. Between this point and Campbell's the river is bordered in many places by one or two terraces of water-worn pebbles, the highest one sometimes being 200 feet above the river. Near where the river cuts across the limestone above Campbell's is a red porphyritic rock, resembling that seen under the limestone farther south.

The presence of quartzose rock and conglomerates associated with the McCloud limestone, generally overlying, would in itself indicate a different geological horizon from that of the limestone on Squaw Creek, which is almost exclusively associated with slates.

Many of the conglomerates or tuffs contain green, dark red, or purplish pebbles, similar in appearance to the massive rocks, but no non-conformity is apparent in the whole series, so that it is not likely any formation which now appears could be the source of the pebbles.

Coarse Conglomerates

generally overlie the limestone, while quartzite and sandstone occur on both sides.

Between the mouth of Campbell's Creek and the Fisheries, on the east side of the river, fossils are frequently seen. At one spot imperfect trilobites were obtained. Three miles above the Fisheries a cherty limestone was seen, with a strike nearly east and west.

(*To be continued.*)

THE METAL MARKETS.

THE METAL MARKET—LONDON, June 8.

Copper.

THE first business in G.M.B.'s was a cash warrant at £38 12s. 6d. and some three months at £38 17s. 6d. The total business for the day amounted to about 450 tons. Tuesday's transactions were about 400 tons, but a little buying of cash warrants produced a somewhat firmer tone, and up to £38 18s. 9d. was paid for the position named, whilst Wednesday witnessed a further advance, viz., to £39 s.c., and £39 6s. 3d. The day's turnover was only about 150 tons, however, and moderate sales on the following days sufficed to flatten the market again, the close being at £38 15s. s.c. To-day we have had an irregular market, with business in s.c. at £38 10s., and then at £38 11s. 3d., £38 12s. 6d., and £38 13s. 9d., and we close firm at £38 13s. 9d. to £38 15s. s.c., and £39 to £39 1s. 3d. three months. As far as can be made out from the Board of Trade returns, the quantity of copper with consumers and others in England, not included in the statistics, must be larger now than for several years past. We append the figures in question:—

	Tons.	Tons.
Imports January to June, 1894		52,405
Exports " " "		22,201
Excess of imports over exports		30,204
Stocks (statistical) in England Jan. 1, 1894	40,000	
" " " " June 1, "	42,779	
Increase	2,779	2,779
Leaves, therefore, for English consumption		27,425

Now as the relative figures for 1893 are 24,406 tons, and for 1892 21,524 tons, it follows as stated above that the quantity in England for consumption has much increased during the last three years, and as consumption has been worse this year than in the two previous years, it follows that most of this extra quantity must either be still in stock with consumers or have been warehoused by others.

Tin.

Slackness was the characteristic of this market on Monday and the prices paid—viz., £70 17s. 6d. s.c. and £71 5s. three months were 7s. 6d. under the close of the previous week. On Tuesday prices were unchanged, but business was duller than ever. A rally was induced on Wednesday by a few purchasers chiefly of spot, and £71 7s. 6d. was paid, whilst Thursday brought another advance of 7s. 6d. due to continued buying, though the quantities done were insignificant. The close, however, was weaker and values easier, and to-day prices have declined, the market closing quiet at £71 7s. 6d. to £71 10s. s.c., and £71 12s. 6d. to £71 15s. three months. The movements of tin do not seem to have been affected by those in silver this week. Billiton declined from 43 fl. s.c. to 42¾, and then recovered to 43¼ fl., at which it closes. The Dutch market has been quiet this week with very little business being done, as holders were asking too high prices. Billiton or Straits ruled between £70 15s. to £71 5s. spot, and £71 5s. to £71 10s. distant.

Pig Iron.

In Glasgow cash Scotch has fluctuated between 41s. 6½d. on Monday and 41s. 11½d., which was paid yesterday and to-day. The business done has been of only moderate dimensions, and to-day the market closes rather easier at 41s. 8d. s.c., Scotch 43s. 9d. s.c. hematite, and 35s. 3d. s.c. Cleveland. The Scotch shipments for last week are advised as 7109 tons—*i.e.*, 480 tons over those of the corresponding period of last year.

Lead.—Soft foreign has changed hands at £9 2s. 6d., and the tone of this market is weak. It closes dull at £9 2s. 6d. soft foreign, and £9 3s. 9d. to £9 5s. English.

Spelter.—The moderate demand of a few days back seems to have been satisfied, and things are very quiet in this and the allied trades. The closing market quotations are £15 12s. 6d. for ordinaries, and £15 15s. for specials.

Antimony is dull and without special feature at £32 10s. to £33.

Quicksilver continues quiet at £6 for firsts, and £5 19s. for seconds

The following are to-night's (June 8) prices of metals:—

	£ s. d.	£ s. d.
Copper.		
Tough cake and ingot	40 15 0	41 5 0
Best selected	41 10 0	42 10 0
Sheets and sheathing	49 0 0	50 0 0
Flat bottoms	52 0 0	53 0 0
Chili bars	38 12 9	39 0 0
Good merchantable, spot, & 3 months respectively		
Copper tubes, seamless		0 0 7¼
Alloys.		
Brass: Wire		0 0 5
" Tubes (solid drawn)		0 0 5¾
" Sheets		0 0 5¼
Phosphor Bronze: Alloys II.		88 0 0
" " III. or V } Cog Wheel Brand		93 0 0
" " VII. }		95 0 0
" " XI.		90 0 0
" " Vulcan brand A1 B.C.	80 0 0	85 0 0
Duro Metal	80 0 0	85 0 0
Bull's Metal		70 0 0
Ferrobronze (Vivian's).		
Ingots ...per lb.	0 0 5¾	
Ordinary sheets, plates, bolts and bars	0 0 6¾	
Screw bolts and nuts	0 0 8¾	
Pump rods, plain	0 0 7¾	
" finished	0 0 10¾	
Delta Metal: No. 4 (per ton)		73 10
" Sheets and plates (per lb.)	0 0 10¼	
" Bars, round, square, flat (per lb.)	0 0 9¼	
" " hexagon (per lb.)	0 0 9	
Tin.		
English, ingots, f.o.b.	74 10 0	75 0 0
" bars	75 10 0	76 0 0
" refined	76 10 0	77 0 0
Straits, spot and 3 months respectively	71 7 6	71 12 6
Australian spot, and three months respectively	72 0 0	72 5 0
Banca " (in Holland)	74 10 0	74 12 6
Tin Plates: Charcoal, best quality per box	0 16 6	0 18 0
" " ordinary	0 14 6	0 16 0
" Coke, best quality	0 10 9	0 11 3
" " ordinary	—	0 10 3

These prices of tinplates are f.o.b. at Swansea: at Liverpool 6d. per box more.

Iron.		
Pig, G.M.B., f.o.b., Clyde, spot		2 1 8
" Scotch pig, No. 1 Gartsherrie		3 10 0
" " Coltness		3 15 6
" " Clyde		2 9 6
" " Govan		2 8 6
Bars, Welsh, f.o.b. Wales		6 2 6
Plates " "		6 5 0
Bars, Staffordshire, at works		5 7 6
Sheets " "		6 10 0
Plates " "		5 7 6
Hoops " "		5 10 0
Ship plates, Middlesborough		4 17 6
Steel: English spring nominal } according to quality	10 0 0	20 0 0
" " cast	35 0 0	60 0 0
" Rails at works, according to section	3 12 6	4 15 0
Lead.		
Spanish or soft foreign	9 3 9	9 2 6
English pig, common		9 5 0
" L.B.		9 15 0
" sheet and bar		10 2 6
" pipe		10 12 6
" red		12 0 0
" white		16 0 0
" patent shot		13 10 0
Spelter.		
Silesian ordinary brands		15 12 6
" special brands		15 15 0
English Swansea	16 3 9	16 6 3
Sheet Zinc	18 5 0	19 10 0
Antimony.		
Antimony	32 10 0	33 0 0
Quicksilver.		
Flasks, 75 lbs. warrants	6 0 0	6 10 0
Ore, c.i.f., U.K. ports	per unit.	
Manganese.		
1st quality, 50 per cent. and upwards	0 0 10½	0 0 11¼
2nd " 47 per cent. to 50 per cent.	0 0 9¾	0 0 10¾
3rd " 40 " 47 per cent.	0 0 8	0 0 10
Aluminium.		Per lb.
98-99¼ per cent. (guaranteed 96 per cent. min.) in ingots (1 cwt. lots)		0 1 11
do do (1 ton lots)		0 1 10
Nickel.		
98-99 per cent. guaranteed	0 1 7½	0 1 8½

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bx*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver *R*, Ruby; *S*, Silver; *S-l*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "called up" column of British Mines, signifies that the mine is conducted on "Cost Book" principles; † in the "Head Office" column of African Mines, signifies that the address given is not that of the head office, but of a sub- or transfer office and ‡, following the names of African mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct; we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name.	Closing Price, June 8, 1894	Closing Price, June 1, 1894.	Par.	Latest Dividend	Called up Per Share.	Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Atlas .....*T*	—	—	1 0	—	1 0 0	12,000	Devon	Camborne.
Blue Hills .....*CT*	10/- 15/-	—	*	2/- May '81	5 9 6	5,353	Cornwall	Camborne.
Botallack .....*T*	—	—	*	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea .....*T*	9½ 9¾	10¾	*	2/6 Dec., '93	21 12 5	6,000	Cornwall	Carn Brea.
Cook's Kitchen ..*T*	2/6 7/6	10/-	*	—	35 5 10	4,900	Cornwall	Camborne.
Cumberland .....*L*	—	—	1 0	5% May, '88	1 0 0	51,988	Cumberland..	7, Angel-court E.C.
Derwentwatr.*CLZ*	—	—	1 0	—	1 0 0	10,050	Cumberland..	Manchester.
Devon Gt Cons.*CA*	25/- 27/6	27/6	5 0	3/- May, '94	2 0 0	10,240	Devon	8, Finsbury-circus.
Dolcoath .....*T*	71/- 72/-	71/-	*	12/6 Apr. '94	9 12 6	4,700	Cornwall	Camborne.
Drakewalls *CTM*	—	—	0 5	—	0 2 0	81,856	Cornwall	Dashwood House.
East Grassington *L*	—	—	1 0	—	1 0 0	19,975	Yorkshire	Palmerston-building
East Pool .....*ATF*	10 10¾	10¾	*	2/- April '94	0 9 9	6,400	Cornwall	Illogan.
Gawton .....*CA*	—	—	2 10	—	2 7 0	12,000	Devon	20, Great St. Helens.
Great Laxey.....*L*	1 2	2	4 0	5/- Apr., '92	4 0 0	15,000	Isle of Man ...	Douglas, Isl of Man.
Green Hurth ...*L*	1/3 1/9	1/9	1 0	-/6 June '89	0 19 0	32,000	Cumberland...	Newcastle.
Halkyn .....*L*	—	—	1 0	2/- Sep. '93	1 0 0	10,000	Flintshire.....	Chester.
Hexworthy .....*T*	—	—	1 0	—	1 0 0	14,634	Devon	6, Queen-street-place
Isle of Man .....*L*	—	—	5 0	5/6 Sep. '93	5 0 0	14,000	Isle of Man ...	Chester.
Killifreth .....*T*	3¼ 3½	2½	*	3/6 Dec. '93	5 11 6	6,000	Cornwall	Truro.
Kingside.....*LB:*	—	—	1 0	3/- May, 1892	1 0 0	15,919	Cardiganshire	6, Queen-street-place.
Lead Hills .....*L*	15/- 20/-	20/-	6 0	3/- Sep. '91	6 0 0	20,000	Lanarkshire ...	30, Finsbury-circus.
Levant .....*CT*	—	—	*	5/- Dec., '93	11 9 6	2,560	Cornwall	Penzance.
Lovell .....*T*	—	—	*	1/3 Nov., '91	1 16 7	7,165	Wendron	3, Gt. Queen-st.,S.W.
Minera (New) ...*L*	—	—	5 0	5/6 Mar. '90	5 0 0	9,000	Denbighshire.	Minera, N. Wales.
Nenthd&Tndle.*LZ*	-/6 1/-	1/-	1 0	6% Feb., '91	0 18 0	42,875	Northumberld	Newcastle on-Tyne
New Balleswidd'n*T*	—	—	1 0	—	1 0 0	25,000	Cornwall	St.Clement's Ho.,E.C
NewCooksKitn.*TC*	—	—	*	—	10 18 3	4,900	Cornwall	Camborne.
Pedn-an-dres ...*T*	—	—	*	—	4 3 6	7,000	Cornwall	Redruth.
Phœnix United*TC*	1/- 3/-	3/-	*	1/- Mar. '90	6 19 6	10,665	Cornwall	Liskeard.
Polberro .....*T*	25/- 27/6	27/6	*	—	3 7 9	12,000	Cornwall	37, Walbrook.
Prince of Wales*TC*	2/- 3/-	3/-	0 10	—	0 8 3	94,287	Cornwall	6, Draper's-gardens.
So. Condurrow *TC*	12/6 17/6	17/6	*	3/6 Apr. '93	17 17 7	6,123	Cornwall	20, Great St Helens
South Crofty *TA*	1¾ 2¾	2¾	*	—	17 2 6	6,120	Cornwall	Pool, Cornwall.
S. Frances Untd. *T*	15/- 20/-	20/-	*	—	2 7 6	6,000	Cornwall	Redruth.
Tincroft .....*T*	12¾ 12¾	13	*	2/- Apr. '94	15 7 6	6,000	Cornwall	Carn Brea.
Weardale .....*L*	6/6 7/6	7/6	4 0	1/3 Oct. '90	1 10 0	50,000	Durham.....	3, Lombard-court.
West Frances ...*T*	1½ 2	2	—	2/6 May, '89	15 17 1	6,144	Cornwall	Camborne.
West Kitty .....*T*	6¾ 6¾	6¾	*	4/- Jan, '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheal Agar ..*TA*	2 2¼	2½	*	2/6 Aug. '88	23 5 2	6,000	Cornwall	Redruth.
Wheal Basset ...*TC*	2¾ 2¾	2¾	*	10/- Apr.'88	12 5 0	6,144	Cornwall	Redruth.
Wheal Friendly..*T*	2/- 4/-	4/-	*	—	0 11 3	10 000	Cornwall	37, Walbrook, E.C.
Wheal Grenville *T*	16 18	18	*	3/- Feb. '94	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheal Kitty.....*T*	8/9 11/3	10/-	*	3/- Mar. '88	4 5 6	8,590	Cornwall	Truro.
Wheal Metal &F.*T*	—	—	*	—	0 13 9	10,784	Cornwall	79¾, Gracechurch-st

AUSTRALIAN AND NEW ZEALAND MINES.

Achilles Gld Fld.	1 1¾	1¾	1 0	—	1 0 0	80,307	New Zealand	3, Church Pas , E.C.
Aladdins Lamp *G*	18/9 21/3	1¾	1 0	1/- Apr. '54	1 0 0	100,000	N S Wales ...	4-6, Throg. Avenue.
Anglo-Saxon ...*G*	—	—	1 0	2/- July, '89	1 0 0	51,000	Queensland ..	4, Lombard-court.
Australasian .....*G*	1/6 2/-	2/-	1 0	-/6 Mar., '92	1 0 0	210,000	Queensland ..	6, Queen-st., place
Australian .....*C*	—	—	20 0	1/6 Aug. '93	7 10 0	18,315	So. Australia.	15, Old Jewry Chbrs,
Aus. Bro. Hill Con.	1/6 2/-	2/3	1 0	1/- June, '91	1 0 0	540,000	N. S. Wales ...	Winchester House,
Baker's Creek ...*G*	1¾ 1¾	1¾	1 0	1/- June '94	0 17 6	100,000	N. S. Wales ...	Hillgrove, N.S.Wales
Bayley's Reward *G*	12/- 14/-	17	1 0	-/4 May '94	1 0 0	480,000	W. Australia...	2, Met. Ex. Buildings
Blue Spur & G. G.	-/6 1/-	1/-	1 0	—	1 0 0	75,926	New Zealand	6, Gt. St. Helens'
Bonnie Dundee *G*	3/6 4/-	4/-	1 0	—	0 18 0	120,000	Queensland ..	3-5, Gracechurch-st
Brilliant.....	8/- 10/- xd	8/-	2 0	—	2 0 0	250,000	Queensland ..	Charters Towers.
Brilliant Block ..*G*	1½ 1¾	1¾	2 0	-/9 June '94	2 0 0	250,000	Queensland ...	2, Gracechurch-st.
Brilliant, St. Geo.	9/ 11/-	—	0 10	—	0 6 3	72,000	Queensland ...	Charters Towers.
Brit. Brok. Hill *S*	2/9 3/3	3/3	5 0	—	5 0 0	240,000	N. S. Wales ...	Abchurch Chambers
Broken Hill Prop.	2¾ 2¾	2¾	0 8	1/- June '94	0 8 0	960,000	N. S. Wales ...	Abchurch Chambers
Carrington.....*G*	1/6 2/-	2/6	12 6	—	0 12 6	100,000	Queensland ...	9, Tokenhouse Yard.
Craven's Cal.	4/3 4/9	4/9	0 6	-/3 Apr., '94	0 4 6	100,000	Queensland ..	30-1, S. Swithin's-le.
Croydon King Blk.	—	—	0 5	—	0 5 0	60,000	N. Queensland	Leadenhall Bldg. E.C.
Cumbrind (New)*G*	-/3 -/9	-/9	1 0	2/6 Dec, '87	1 0 2	154,490	Queensland ...	Blomfield House E.C.
DayDawn B.&W.*G*	6/- 6/6	5/9	1 0	-/6 Mar. 93	1 0 0	498,400	Queensland ...	3-5, Gracechurch-st.
Day Dawn P. C. *G*	3/6 4/-	4/-	1 0	-/6 Apr, '92	1 0 0	490,000	Queensland ...	Winchester Ho..E.C
Eaglehawk.....*G*	-/6 1/-	1/-	1 0	—	0 19 3	120,000	Victoria.....	31, Lombard-street,
Etheridge .....*G*	— —	—	0 5	—	0 5 0	324,790	Queensland ..	6-7, Queen-street-pl.
Glenrock	1/6 2/-	2/-	1 0	—	0 19 6	225,000	N. Zealand ...	3-5, Queen-st. E.C.
Golden Gate.....*G*	-/6 1/-	1/6	0 10	—	0 10 0	150,000	Queensland..	9, Tokenhouse Yard.
Harrietville .....*G*	— —	—	1 0	-/6 July, '90	1 0 0	146,330	Victoria.....	6-7, Queen-street-pl.
Kaboonga .....*G*	1/1¾ 1/1¾	1/1¾	0 10	—	0 10 0	500,000	Queensland...	30, St. Swithin's-lane
Kangarilla .....*S*	-/9 1/3	1/3	1 0	—	1 0 0	58,575	So. Australia	68, Coleman-street.
Kapanga.....*G*	2/6 3/-	1/6	1 0	-/6 Jan. '91	0 19 0	250,000	N Zealand ...	9, New Broad-street.
Kilkivan	1/6 2/-	2/-	1 0	—	0 19 9	81,392	Queensland ...	4, Coleman-street.
Midas G. F. .... *G*	— —	—	1 0	—	1 0 0	160,000	Victoria.....	32, Poultry, E.C.
Millis' Day Dawn*G*	1¾ 1¾	1¾	1 0	-/6 May, '54	0 15 9	300,000	Queensland ..	3, Gracechurch-st.
Moruya ..... *GS*	— —	—	1 0	—	1 0 0	59,235	N. S. Wales ...	16, St. Helen's-place.
Mosman .....*G*	3/- 3/8	3/9	1 0	-/6 May, '94	1 0 0	185,000	Queensland ...	3-5, Gracechurch-st.
Mt. Leyshon .....*G*	-/9 1/3	1/3	1 0	-/6 Dec. '90	1 0 0	157,989	Queensland ...	7, Draper's-gardens.
Mountain Maid *G*	— —	—	0 10	—	0 6 3	56,000	Queensland...	Leadenhall Bldgs.
Mount Morgan *G*	2½ 2½	—	1 0	-/6 June '94	0 17 6	1,000,000	Queensland ...	50, Lime-street.
Mt. Shamrock *GB*	— —	—	1 0	—	1 0 0	275,000	Queensland ...	9, Tokenhouse-yard.
Mount Zeehan.....	-/6 1/-	1/-	1 0	—	1 0 0	193,257	Tasmania	Mansion Ho. Cham.
New Queen ..... *G*	7/3 7/9	7/9	1 0	-/6 Apr., '94	0 19 6	158,915	Queensland ...	30, St. Swithin's-la.
Port Phillip .....*G*	— —	—	0 5	—	0 5 0	200,000	Victoria	57, Moorgate-st.,E.C.
Queen's Bthdy Un	— —	—	1 0	—	0 10 0	—	Victoria	7-8, Gt. Winchster St.
Queens. Smelting	½ ⅝	⅝	0 —	—	1 0 0	36,244	Queensland ...	9, Tokenhouse Yard.
ScottishAustralian	⅞ 1	1	1 6	44-5d. May,'94	1 0 0	200,00	N.S. Wales ...	Winchester Ho. E.C.
Sunburst	— —	—	0 10	-/6 Mar. '92	0 10 0	150,000	Queensland ...	9, Tokenhouse Yard.
Tasmanian Crown	— —	—	1 0	—	1 0 0	125,990	Tasmania	8, Old Jewry, E.C.
Tipperary	— —	—	1 0	—	1 0 0	35,000	N. Zealand ...	3-5, Queen-st., E.C.
True Blue	— —	—	1 0	—	1 0 0	53,000	Australia	Leadenhall Bldg. E.C.
Victoria	— —	—	1 0	-/6 Mar, '94	1 0 0	144,000	Char. Towers	6, Crosby-square
Victory..... *G*	7/- 8/-	8/6	0 5	—	0 5 0	200,000	Queensland ...	32, Gresham-st., E.C
Waihi..... *G*	1¾ 1¾	1¾	1 0	1/- June '94	1 0 0	150,000	New Zealand	11, Abchurch-la. E.C
Wentworth Ord.*G*	4/- 5/-	8/-	1 0	—	1 0 0	350,000	N. S. Wales ...	4-6, Throgmort. Av.
Went. Priority ...	⅛ ⅜	—	1 0	6/- Jan. '93	1 0 0	150,000	N. S. Wales ..	4 6, Throgmort. Av.
W.Australian G.F	1/- 2/-pm	—	1 0	—	0 4 0	65,000	W. Australia...	23 29. S. Swithin's-la.
W. Argentine . *G*	1/6 1/9	—	1 0	—	0 19 0	150,000	N. Zealand ...	3-5, Queen-street.

INDIAN AND ASIATIC MINES.

Balaghat Mysore*G*	7/3 7/9	8/-	1 0	—	0 17 0	160,000	India	6-7, Queen-street-pl.
Burma Ruby .....*R*	3/3 3/9	4/-	1 0	—	0 17 0	300,000	Burmah	Suffolk House, E.C.
ChampionReef...*G*	3⅛ 4	4⅛	1 0	—	1 0 0	200,000	India	6-7, Queen-street-pl
Colar Central ...*G*	-/3 -/5	-/6	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel..... *G*	2/- 3/-	5/8	1 0	—	0 12 6	95,000	India	6-7, Queen-st.-place.
Deva&a Movar ...*G*	— —	—	1 0	—	1 0 0	200,000	India	34, Nicholas-lane.
Gemming&Mining	— —	—	2 0	—	1 7 6	19,594	Ceylon	183, Gresham House.
GoldFldsMysore*G*	23/6 24/6xd	24/6 xd	1 0	1/- July '91	1 0 0	220,000	India	6-7, Queen-street pl.
Gold Flds Siam *G*	— —	—	1 0	—	1 0 0	150,000	Siam	19, St. Swithin's-lane.
Hyderabad Dec. ..	5⅛ 6	6	10 0	—	10 0 0	115,000	Deccan	16, St. Helen's-place.
Kempinkote GdFd	1/6 1/9	1/9	0 5	—	0 3 0	665,473	India	6-7, Queen-st.-place.
Mysore ..... *G*	2⅛ 3⅛	3⅛	1 0	3/- July, '94	1 0 0	250,000	India	6-7 Queen-street pl.
My. Barnhalli ...*G*	2/- 2/6	—	1 0	—	0 12 6	100,000	India	2, East India Avenue
Mysore Reefs ...*G*	14/- 15/-	14/6	1 0	—	0 19 0	135,007	India	6-7, Queen-street-pl.
Mysore West ...*G*	3/9 4/3	4/6	1 0	—	1 0 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynaad *G*	1/- 1/6	1/9	1 0	—	1 0 0	250,000	India	Dashwood Ho., E.C.
Nerbudda Coal &In	— —	—	3 0	—	2 11 0	49,839	India	213, Gresham House
Nine Reefs .....*G*	1/6 2/6	2/3	0 10	—	0 10 0	50,000	India	6-7, Queen-street-pl.
Nine Reefs	-/6 1/-	—	0 10	—	0 9 0	200,000	India	6-7, Queen-street-pl.
Nundydroog..... *G*	1⅛ 1¼	2/-	1 0	1/- Mar. '94	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum (Df.O.)*C*	4⅜ 4⅝	4½	1 0	4/- Mar., '94	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	5¼ 5⅝	5⅜	1 0	4/- Mar., 94	1 0 0	120,000	India	6-7, Queen-street-pl.
Pahang Corpn. ...	7/- 8/-	—	1 0	15% Apr, '89	1 0 0	303,070	Malay Penin.	Blomfield Ho., E.C.
Pahang Kabang...	— —	—	1 0	—	1 0 0	394,760	Malay Penin.	4a, Jeffrey's sq., E.C.
South B. Mysore*G*	5/3 5/9	5/-	0 4	—	0 2 9	133,074	India	6-7, Queen-street-pl.

EUROPEAN MINES.

Alamillos .....*L*	⅜ ⅝	⅝	2 0	-/3 Sept. '92	2 0 0	35,000	Spain	8, Queen-street-place.
Argentella .....*C*	—	—	1 0	—	1 0 0	133,165	Corsica	16, Philpot-lane.
English Cr. Spelter	—	—	1 0	5% Dec. '92	1 0 0	84,000	Lombardy	9, Queen-street-place
Fortuna ... . *L*	⅜ ⅝	⅝	2 0	-/6 Sept. '92	2 0 0	25,000	Spain	6, Queen-street-place
Libiola.....*C*	3 3¼	3⅜	5 0	5/- Mar. '94	5 0 0	60,000	Italy	Dashwood Ho., E.C.
Linares .....*L*	2¾ 3	3	3 0	4/- May,'14	3 0 0	14,998	Spain	6, Queen-street-place
Marbella .....*I*	54/- 56/-	56/-	10 0	8/- Mar. '93	10 0 0	25,000	Spain	78,Queen Victoria-st.
Mason & Barry...*C*	2¾ 3¾	2¾	5 0	2/- May. '94	5 0 0	185,172	Portugal	87, Cannon-street.
Oscar .....*G*	— —	—	5 0	—	0 4 8	117,240	Norway	6a, Austin Friars.
Pestarena .....*G*	2/3 2/9	2/6	3 0	—	3 0 0	67,209	Italy	6-7, Queen-street-pl.
Pontgibaud.....*L*	— —	—	20 0	11/5Dec.'93	20 0 0	14,000	France	6-7, Queen-street-pl.
Rio Tinto .....*C*	23½ 23⅝	14½ xd	10 0	7/- May,'94	10 0 0	325,000	Spain	30, St. Swithin's-lane
Do. (Mort. Bonds)	104⅝ 105⅛	104⅝	100 0	5% Apr. '94	100 0 0	2,158,960	Spain	30, St. Swithin's-lane
Do, (2nd do.)	102⅝ 103⅛	102⅝	100 0	5% Apr. '94	100 0 0	1,127,180	Spain	30, St. Swithin's-lane
Sipanji .....*AQ*	7/- 9/-	9/-	1 0	—	0 19 0	96,000	Servia	120,Bishopsgt-st,Wn.
Tharsis.....*C Sul*	4⅝ 4⅞	4⅝	2 0	12½% Mar. '94	8 0 0	425,000	Spain	Glasgow.
West Prussian Pre.	— —	—	10 0	5% Mar. '94	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	— —	—	10 0	5% Mar. '94	10 0 0	14,000	Germany	Walbrook Ho., E.C.

NORTH AMERICAN MINES.

Name.	Closing Price, June 8, 1894	Closing Price, June 1, 1894.	Par.	Latest Dividend.	Called up per Share.	Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Almada and T... *S*	-/3 -/9	-/9	2/6	—	0 2 6	351,008	Mexico	6, Queen-street-place
American Belle...*S*	1/6 2/-	2/-	1 0	-/6 Mar. '91	1 0 0	400,000	Colorado	25A, Old Broad-street
Big Creek	—	—	1 0	1/- Dec. '91	1 0 0	80,000	Nevada	2, Pancras-lane, E.C.
California	—	—	0 10	-/6 May '90	0 8 9	129,571	Colorado	St. George's Ho E.C.
Canadian Phos. *P*	—	—	1 0	-/6 Nov.'90	1 0 0	73,334	Canada	155, Fenchurch-st.
Chispas	—	—	1 0	—	1 0 0	221,876	Mexico	33, Broad-st. Av. E.C.
Colorado Silver...*S*	—	—	1 0	—	1 0 0	112,491	Colorado	Abchurch-chbrs. E.C
Cortez	—	—	1 0	3 % Feb. '93	1 0 0	300,000	Nevada	Suffolk House, E.C.
De Lamar.....*GS*	18/6 19/6	18/-	1 0	1/- April 94	1 0 0	400,000	Idaho	6, Draper's-gardens.
Dickens Custer*GS*	-/3	—	1 0	—	0 19 9	420,000	Idaho	Winchester Ho. E.C.
Elkhorn .....*S*	12/6 13⅞	13/-	1 0	-/9 Mar, '94	1 0 0	175,007	Montana	6, Draper's-gardens.
Emma .....*S*	-/3 -/6	-/6	0 5	—	0 5 0	403,618	Utah	15, Geo-st, Mansn. Ho
Flagstaff .....*S*	-/3 -/6	-/6	1 0	—	0 18 3	240,000	Utah	Dashwood Ho.. E.C.
Garfield ..... *GS*	—	—	1 0	-/6 Dec. '88	0 19 6	98,185	Nevada	Suffolk House, E.C.
Golden Feather *G*	8/6 9/6	9/-	1 0	—	1 0 0	180,000	California ...	8, Stephens Ca E.C.
Golden Gate.....	6/- 7/-	7/-	1 0	—	0 19 6	79,600	California ...	8, Stephens Ca E.C.
Golden Leaf..... *G*	-/9 1/3	1/3	1 0	—	1 0 0	300,259	Montana	8, Draper's Gardens.
Golden Valley...*G*	—	—	1 0	—	1 0 0	55,507	Colorado	15, Angel Court
Harquahala..... *G*	9/- 11/-	11/6	1 0	-/6 Apr, '94	1 0 0	300,000	Arizona	6, Draper's Gardens.
Ho'comb Valley *G*	-/9 1/-	1/1½	0 5	—	0 5 0	540,000	California ...	14, Cornhill E.C.
Idaho.....*GS*	1/4½ 1/7½	1/9	1 0	—	0 4 8	143,439	Idaho	140, Leadenhall-st,
Jackson Goldfields	—	—	5 0	—	0 5 0	408,635	California	8, Drapers' Gardens,
Jay Hawk .....*G*	6/6 7/6	7/6	1 0	-/6 Dec. '92	1 0 0	285,000	Montana	Dashwood House,
Kohinoor "B"*GS*	—	—	1 0	-/6 June.'81	1 0 0	112,901	Colorado	Bloomfield Ho., E.C.
La Plata.....*S*	-/3 -/6	-/6	0 5	1/3 Oct. '82	0 4 3	405,000	Colorado	11, Poultry, E.C.
Maid of Erin	—	—	1 0	4c. pahMar,'94	1 0 0	575,000	Colorado	43, Threadneedle-st.
Mammoth Gold ...	-/3 -/9	-/9	1 0	—	1 0 0	400,000	Pinal Arizona.	257, Winchester He.
Mesq. d'l Oro (P) *G*	⅛ 1	1	5 0	—	5 0 0	10,000	Mexico	Dashwood Ho.. E.C.
Mesq. d'l Oro (D) *G*	⅛ ⅜	⅜	5 0	—	5 0 0	10,000	Mexico	Dashwood Ho., E C
Montana	6/- 8/6	6/6	1 0	5% April '91	0 19 0	857,158	Montana	Gresham House,E.C
New Colorado	—	—	1 0	—	0 17 0	65,000	Colorado	Abchurch Cham E.C
N.Consolidated*SC*	—	—	1 0	—	1 0 0	160,000	Eberhardt,U.S	19a, Coleman-street.
N. Eberhardt.....*S*	—	—	0 5	—	0 3 6	248,576	Nevada	15, Angel-court, E.C.
N. Gold Hill .....*G*	—	—	1 0	—	0 19 9	191,045	N. Carolina ...	15, George-st., E.C.
New Guston .....*S*	14/- 18/-	16/-	1 0	1/- Oct. '92	1 0 0	110,000	Colorado	25A. Old Broad-st.
New London	—	—	2/6	—	0 2 6	327,816	New Carolina	55, Bishopsgt.-st.Wn
N. Hoover Hill...*G*	—	—	0 10	-/9 Dec. '85	0 10 0	120,000	N. Carolina ...	Langthorne Ho..E.C
New Vancouver	⅜	—	1 0	3% May, '94	1 0 0	215,000	Brit. Columbia	12, Old Jewry Chm.
Palmarejo ... *GS*	1/- 1/6	1/6	1 0	—	1 0 0	418,888	Mexico	4, Copthall-buildings
Pinos Altos (N)*GS*	6/6 7/6	7/6	1 0	-/6 Mar.' 90	1 0 0	160,000	Mexico	110, Cannon-street.
Pittsbg Con. (N) *G*	—	—	1 0	1/6 Mar. '88	1 0 0	77,147	Nevada	Suffolk House, E.C
Poorman Con.....*S*	7/- 8/-	8/-	0 5	—	0 5 0	273,948	Idaho	5, Copthall-b'gs. E.C
Red Mountain ...*S*	—	—	1 0	—	1 0 0	46,686	Colorado	11, Poultry, E.C.
Richmond ...*GSL*	7/- 9/-	1/16	5 0	1/- Sep. '93	5 0 0	54,000	Nevada	44, Coleman-street.
Ruby .....*GSL*	—	—	0 5	—	0 5 0	221,371	Nevada	22 St. Mary Axe.
Sierra Buttes ...*G*	8/- 10/-	10/-	2 0	-/6 Apr, '94	2 0 0	122,500	California	138, Leadenhall-st.
Twin Lake Placers	—	—	1 0	1/3 Mar. '94	1 0 0	24,564	Colorado	5, Lawrence P. Hl.E.C
Do. Plumas Eur. *G*	⅝ ¾	¾	2 0	-/9 Apr. '94	2 0 0	140,265	California	138, Leadenhall-st.
Springdale.....*G*	2/- 2/6	2/6	$1	16⅔ % Dec. '92	$1	1,000,000	Colorado	20, Abchurch Lane.
United Mexican *S*	1/- 1/6	1/6	1 0	2/6 May, '87	1 0 0	906,654	Mexico	3, Gt. Winchester st.
Viola (New).....	—	—	1 0	—	1 0 0	150,000	Idaho	Broad-st.House, E.C.

SOUTH AND CENTRAL AMERICAN MINES.

Antio. (Pref.) *G.S.*	—	—	1 0	-/6 Mar. '90	1 0 0	22,820	Colombia	134, Gresham Ho.
Antioquia(ordiny)	—	—	1 0	—	1 0 0	42,453	Colombia	134, Gresham Ho.
Callao Bls.... *G*	-/7½ -/10¾	-/10¾	1 0	—	1 0 0	316,248	Venezuela ...	60, Old Broad-street.
Camarones..... *C*	—	—	2 0	—	2 0 0	67,000	Chili	123, Bishopsgt. Wn.
Carabal..... *G*	-/3 -/6	-/6	2 6	—	0 2 4	1,330,000	Venezuela ...	57, Moorgate-st. E.C.
Colon ..... *G*	-/3 -/8	1/-	1 0	—	1 0 0	200,000	Colombia	5,Copthall-bdgs.,E.C.
Colorado Nit. ...*N*	3 3¼	3¼	5 0	7/8 May, '89	5 0 0	32,000	Chili	12, King-st., Liverp'l.
Colombian Hy.. *G*	15/8 16/8	16/8	1 0	1/- April '94	1 0 0	75,000	Colombia	10, Blomfield-street,
Copiapo ..... *C*	1⅛ 1¹³⁄₁₆	1¹³⁄₁₆	2 0	1/6 June '94	2 0 0	100,000	Chili	Dashwood House,E.C
Darien..... *G*	— —	—	1 0	—	1 0 0	71,359	Colombia	Manchester.
Don Pedro.....*G*	1/6 2/-	2/6	1 0	—	1 0 0	133,102	Brazil.....	24-5, Devonsh.Cs.E.C
El Callao .....*G*	⅞ 1⅛	1⅛	5 0	2 frc. Nov.'90	5 0 0	257,600	Venezuela ...	8, Bishopsgt.-st, Wn.
Frontino & B....*G*	20/6 21/6	21/6	1 0	1/6 Dec. '93	0 19 0	128,662	Colombia	134, Gresham House.
Glenrock .....*G*	1/6 2/-	2/-	1 0	—	0 18 6	199,948	Argen. (&Ind)	3-5, Queen-street, E.C
Glenrock (Pref.)...	— —	—	1 0	—	0 16 0	16,232	Argen. (&Ind)	3-5, Queen-street, E.C
Gravel.....*G*	5/- 6/-	6/-	1 0	—	0 19 6	100,000	Colombia	10

"THE MINING JOURNAL" SHARE LIST (African Mines continued).

Name.	Closing Price, June 8, 1894.	Closing Price, June 1, 1894.	Par.	Latest Dividend.	Called up Per Share.	Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Joe's Luck.....G	1/6	1/9	1/9	1 0	—	£ s. d. 1 0 0	57,404	De Kaap ..... 11, Queen Vic.-st.
Johannesburg Pnr	3¼	3¾	3¾	1 0	12½% Nov.,'93	1 0 0	21,800	Witwatersrdt. Johannesburg.
Jubilee .....G	5	5⅛	5⅛	1 0	30% Apr. '94	1 0 0	30,000	Witwatersrdt. 8, Old Jewry.†
Jumpers .....G	4 15/16	4 15/16	4 7/16	1 0	10% Jan. '93	1 0 0	100,000	Witwatersrdt. 29, Holborn Viaduct]†
Kimberley .....D	9/16 pm		¼ pm		—/—		98,672	Kimberley ... 19, Finsbury circus.
Kimberley Rdpt....	7/8	7/16	—	1 0	—	1 0 0	125,000	Kimberley ... 2, Drapers-gardens.
Kleinfontein (N)G	1 3/16	1 1/16	1 1/16	1 0	—	1 0 0	150,000	Witwatersrdt. 8, Old Jewry.
Klerksdorp ....G	1/6	2/6	2/6	1 0	—	1 0 0	150 007	Transvaal ..... 110, Cannon-street.
Knight .....G	15/6	16/-	16/6	1 0	—	1 0 0	250,000	Witwatersrdt. 19, Bury-street, E.C.
Langlaagte Est. G	4 15/16	4 13/16	4⅝	1 0	12½% Mar, '94	1 0 0	467,000	Witwatersrdt. 59, Holborn Viaduct.]
Do. Royal	2⅜	2⅜	2⅜	1 0	5% Sept. '93	1 0 0	100,000	Witwatersrdt. 2, Drapers-gardens.]
Lisbon-Berlyn .. G	2/9	3/3	3/3	2 6	—	0 2 6	889,233	Lydenburg ... 110, Cannon-street.
Leipsards Vlei Est.	10/-	11/-	12/-	1 0	6% Mar, '90	1 0 0	319,003	Witwatersrdt. Warnford-court.]
Do. do. do.	⅜	¼	¼	1 0	—	0 10 0	25,000	Witwatersrdt. 8, Old Jewry.
Main Reef (New)G	15/-	17/6	¾	1 0	—	0 10 0	300,000	Witwatersrdt. 8, Old Jewry.
May Consol.....G	8/6	9/6	10/-	1 0	—	1 0 0	430,000	Witwatersrdt. 4, Lothbury.]
May Deep Level G	8/6	9/6	10/-	1 0	—	1 0 0	146,000	Witwatersrdt. 33, Cornhill, E.C.
Metropolitan (N) G	12/6	15/-	13 1/16	1 0	—	1 0 0	75,000	Witwatersrdt. 1, Crosby Square.]
Meyer & Charl....G	5¾	6	6	1 0	25% Dec. '93	1 0 0	71,687	Witwatersrdt. Warnford-court.]
Modderfontein .G	16/6	17/6	15/6	1 0	—	1 0 0	200,000	Witwatersrdt. Warnford-court.]
Montrose..... G	—	—	—	1 0	3/- Feb. '90	1 0 0	70,000	De Kaap ..... 65, New Broad-street.
Moodies G.&E....G	8/6	9/6	8/6	1 0	—/4 May '90	1 0 0	120,000	Witwatersrdt. 8, Old Jewry.]
Moodies ..... G	4/-	5/-	5/-	1 0	—	0 15 0	120,000	De Kaap ..... 8, Old Jewry.
Mozambique.....	12/6	15/-	—	1 0	—	1 0 0	400,000	S E. Africa ... Broad-street House,
Namaqua C	¾		¾	2 0	2/6 July '91	2 0 0	194,351	Namaqualand. 34, Leadenhall-bldg.
New Chimes..... G	2 1/16	2 3/16	2⅛	1 0	—	1 0 0	70,000	Witwatersrdt. 8, Old Jewry, E.C.
New Clewer Estate	1	1⅛	1⅛	1 0	—	1 0 0	100,000	Lydenburg ... 29-30, Holborn-viadt.
New Croesus..... G	1⅜	1⅝	1⅝	1 0	5 % Aug. '92	1 0 0	195,000	Langlaagte .. 4, Bishopsgt.-st. Wt.
New Edwin Brav	2/6	3/6	—	7 0	—	7 0 0	65,910	De Kaap ..... 23, College Hill.
New Gordon..... D	4/-	5/-	—	1 0	5% Dec. '89	1 0 0	560,250	Griqualand ... 110, Cannon-street.
New Jagersf. ....D	14¾	14⅞	15¼	10 0	5% Mar., '94	10 0 0	100,000	Transvaal ..... 5, Copthall-buildings
New LouisD'Or..G	5/6	6/-	—	1 0	—	1 0 0	100,000	Witwatersrdt. 53, New Broad-street
New Primrose ...G	4¼	4¾	4⅛	1 0	4/- July, '93	1 0 0	230,000	Witwatersrdt. 2, Draper's-gardens.
New Rietfontein G	1 7/16	1 9/16	1⅜	1 0	—	1 0 0	160,000	Witwatersrdt. Warnford-ct., E.C.
New Spes Bona ..	9/6	10/-	—	1 0	—	1 0 0	113,801	Witwatersrdt. 24, N. John-st., L'pl.
Nigel ..... G	2 11/16	2 13/16	2⅝	1 0	10% Mar. '94	1 0 0	160,000	Witwatersrdt. 1, Crosby-square.
Nooitgedacht E. G	—	—	—	1 0	—	1 0 0	160,000	Lydenburg .. 8, Old Jewry.
Oceana	1¾	2	2	1 0	25/- Nov. '89	1 0 0	150,000	Transvaal ..... 4, Sun Court, E.C.
N. Ophir Concess.	—/9	1/3	1/3	1 0	—	0 18 6	111,857	E. Coast Africa 31, Lombard-street.
Orange F.S.E. ...D	4	4½ xd	4½	1 0	—	1 0 0	284,000	Orange F. State 10, Moorgate-street

Name.	Closing Price, June 8, 1894.	Closing Price, June 1, 1894.	Par.	Latest Dividend.	Called up Per Share.	Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Orion..... G	—	—	1 0	10% May '94	1 0 0	30,000	Witwatersrdt.	10, Basinghall-street
Otto's Kopje.....D	1/6	2/-	1/9	—	0 19 3	437,898	Kimberley ...	113, Cannon-st., E.C.
Paari Central ... G	21/-	23/-	23/-	—	1 0 0	138,750	Transvaal	29-30, Hol. Via., E.C.
Piggs Peak, New G	2/-	3/-	3/-	—	0 16 6	230,326	Swazieland ...	6, Queen-street-place
Potchefstoom ... G	1/6	2/6	2/3	—	1 0 0	161,000	Potchefstroom	19, Bury-st., E.C.
Princess Estate G	20/-	22/-	1	—	1 0 0	72,046	Witwatersrdt.	33, Cornhill, E.C.
Randfontein .....G	17/-	18/-	17/-	—	1 0 0	1,916,500	Witwatersrdt.	59, Holborn Viaduct.]
Rand Mines	8¾	9	—	—	1 0 0	332,793	Witwatersrdt.	29-30, Holborn Via.
Read's Drift .....D	9/6	10/6	10/6	—	—	50,000	Transvaal	19, Finsbury circus,
Robinson .....G	6½	6¾	6½	5 0	4% June '93	5 0 0	543,750	Transvaal ..... 55, Holborn Viaduct]†
Roodepoort Un. G	2 5/16	2 5/16	2 1/16	1 0	—	1 0 0	100,000	Witwatersrdt. Warnford-court.]
St. Augustine ...D	—/9	1/-	—	1 0	—	1 0 0	465,000	Griqualand W 30-1, St. Swithin's-la
Salisbury New ...G	2½	2¾	2¾	1 0	—	1 0 0	93,000	Witwatersrdt. 1, Crosby-square.]
Sheba ..... G	28/6	29/6	23/-	1 0	—/6 April '94	1 0 0	614,450	Lydenburg ... 85, Gracechurch-st.
Silati .....G	3/-	3/6	3/6	1 0	—	0 16 0	625,000	Zoutpansberg. 4, Sun Court, E.C.
Simmer & Jack....G	7	7½	7¼	1 0	10% May '94	1 0 0	85,000	Witwatersrdt. 33, Cornhill.
S.A. Gold Trust	16/-	17/-	17/-	1 0	10% April '93	0 10 0	220,000	South Africa.. 8, Old Jewry.
Spitzkop (New) G	2/9	3/-	3/-	1 0	—	0 19 6	144,531	Lydenburg ... 15, Bishopsgt-st, Wt,
Stanhope .....G	1 15/16	2 1/16	2	1 0	50% May. '93	—	34,000	Witwatersrdt. 1, Crosby Square.]
Sutherland R. ...G	3/9	4/3	4/8	1 0	—	0 18 6	220,000	Zoutpansberg. 3, Budge-row, E.C.
Teutonia.....G	—	—	—	1 0	—	1 0 0	96,000	Witwatersrdt. 8, Old Jewry.
Trans. Coal Trust...	11/6	12/6	12/3	1 0	—/6 Oct, '93	1 0 0	439,965	Witwatersrdt. Broad- t, House, E.C
Trans. Est. & Dev.	10/-	11/-	10/-	1 0	—	1 0 0	285,700	Transvaal ..... 76, O.d Broad-st. E.C.
Trans. Gold .....G	1⅞	2	2½	1 0	1/- Dec, '93	1 0 0	250,000	Transvaal ..... Suffolk House, E.C.
Trans. Land.....	5/6	6/6	—	1 0	—	1 0 0	79,315	Transvaal ..... Suffolk House, E.C.
Trans. Land.....	1/6	2/6	7/8	1 0	—	0 15 0	169,999	Transvaal ..... 33, Cornhill.
Treasury.....G	—	—	—	1 0	7½% May '94	1 0 0	26,000	Witwatersrdt. Johannesburg.
Un. Ivy Reef.....G	⅜	⅞	⅞	1 0	—	1 0 0	45,000	Transvaal ..... 110, Cannon-street
Un. Langlaagte ..	15/-	17/6	17/6	1 0	—	1 0 0	100,000	Witwatersrdt. 23, St. Swithin's-la.
Van Ryn ..... G	10/-	12/6	⅝	1 0	—	1 0 0	99,810	Witwatersrdt. 1, Crosby-square.]
Victory Hill .....G	—	—	—	1 0	—	1 0 0	108,000	De Kaap ..... Portland House, E.C.
Village Main Reef	4½	4⅝	4⅜	1 0	—	1 0 0	132,680	Witwatersrdt. 8, Old Jewry.
Virginia(New)...G	2/9	3/3	3/6	0 10	—	8/-	46,235	Transvaal ..... 26, Budge-row, E.C.
Wemmer .....G	5 1/16	5 3/16	5½	1 0	10% Nov. '91	1 0 0	55,000	Witwatersrdt. 19, Bury-street,]†
Willoughby's	7	8	—	1 0	—	1 0 0	30,000	Mashonaland.. 19, St. Swithin's-lane
Witwatersrandt ...	16/-	17/-	15/8	1 0	—	1 0 0	250,000	Witwatersrdt. 19, Bury-st., E.C.
Wolhuter .....G	3	3¼	3¼	1 0	2/- Apr., '94	1 0 0	120,000	Witwatersrdt. Warnford-court.†
Wolverand.....G	6/-	7/-	7/-	—	0 16 0	102,083	Transvaal.....	8, Co thall-buildings
Worcester .....G	2 1/16	2 1/16	2 1/16 xd	1 0	10% May '94	1 0 0	90,727	Witwatersrdt. 8, Old Jewry.]
Zambesia Explora.	2 11/16	2 13/16	2⅞	—	1 0 0	45,000	Transvaal	13, George-st., E.C.

METAL TRADE STATISTICS.

MAY, 1894.

COPPER.

(From Messrs. Henry R. Merton and Co.'s Circular for May, 1894.)

	May 31, 1894.	May 15, 1894.	Apr. 30, 1894.	31st MAY. 1893.	1892.	1891.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
STOCKS IN ENGLAND AND FRANCE:—						
Liverpool and Swansea, Chili Bars	31,844	31,353	31,301	30,620	29,118	17,728
,, ,, Chili Ingots	805	805	556	38	613	616
,, ,, Chili Ores and Regulus (fine) ...	78	107	92	197	326	4
,, ,, Other Stuff (fine) & English Copper	5,186	4,687	4,630	3,962	7,831	11,637
London (including landing)	5,046	5,056	5,406	6,926	7,493	7,558
Stocks of fine Copper in Havre, Rouen, Bordeaux and Dunkirk	1,001	1,151	1,221	4,808	4,584	17,385
	43,780	42,159	43,206	46,551	49,965	54,908
ADVISED FROM CHILI by Mail and Cable, Fine Copper ...	3,100	2,300	2,800	2,600	3,400	2,350
,, ,, Australia, by Mail and Cable, Fine Copper	700	800	800	800	600	1,000
	47,580	45,259	46,806	49,951	53,965	58,258
Price of Chili Bars and G.M.B.'s per ton	£38 17 6	£39 10 0	£39 17 6	£43 2 6	£46 7 6	£55 5 0

COMPARATIVE STATEMENT.

—	Stock in England and France and Afloat thereto from Chili and Australia.	Price of G.M.B.	Arrivals: England and France.	Other European Ports.	England & France from: Spain and Portugal (excluding Pyrites).	Other Count's.	Charters from Chili to Europe.	Shipments from Australia to London.	Total Suppl's.	Total Deliveries. †
			From N. America.							
Month ending	Tons.		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
31st May 1894	47,580	£38 17 6	2,778	2,759	1,976	3,023	1,850	550	12,936	12,162
30th April ..... ,,	46,808	39 17 6	3,559	2,511	1,057	2,977	1,650	600	12,654	12,445
31st March ..... ,,	46,597	40 15 0	2,548	3,096	1,184	1,699	1,500	850	10,575	11,342
28th February ... ,,	47,364	41 0 0	3, 98	3,276	647	764	1,950	550	10,385	10,173
31st January ... ,,	47,152	41 5 0	4,921	2,809	1,477	890	1,350	500	11,947	12,090
31st December ...1893	47,295	42 15 0	3,848	4,252	1,587	852	2,700	800	13,839	13,371
30th November ,,	46,827	43 0 0	6,146	4,388	1,332	5,884	1,400	450	19,400	20,613
31st October ..... ,,	48,040	42 2 6	7,097	6,275	999	3,082	2,200	1,000	20,653	20,517
30th September ,,	47,904	41 17 6	7,940	3,971	1,255	621	1,700	600	16,087	16,144
31st August ..... ,,	47,961	41 12 6	4,272	2,588	1,535	645	1,500	400	10,940	13,462
31st July ..... ,,	50,483	41 12 6	4,236	2,412	614	2,607	2,400	400	12,669	12,141
30th June ..... ,,	49,955	43 10 0	1,914	2,310	1,958	2,548	1,850	550	11,130	11,126
			52,455	40,947	15,721	25,392	22,050	6,850	163,215	165,585
31st May 1893	49,851	43 2 6	3,179	997	1,291	1,271	1,750	450	8,928	11,071
30th April ..... ,,	52,094	44 10 0	2,521	905	799	1,084	1,600	550	7,459	10,636
31st March ..... ,,	55,271	45 5 0	1,312	687	1,877	3,291	650	600	8,417	10,566
28th February ... ,,	57,420	45 12 6	1,821	632	1,170	2,785	3,000	450	9,858	10,945
31st January ... ,,	58,507	45 2 6	3,266	455	1,453	4,899	1,000	700	11,773	9,011
31st December ...1892	55,745	46 17 6	3,235	542	2,555	3,006	2,600	300	12,238	9,991
30th November ,,	53,498	47 17 6	2,842	623	690	1,725	1,500	700	8,080	10,640
31st October... ... ,,	56,078	45 12 6	752	850	762	2,922	1,650	500	7,436	9,840
30th September ,,	58,482	44 2 6	1,048	535	1,619	2,315	1,750	400	7,667	8,913
31st August ... ... ,,	59,718	44 7 6	2,587	324	965	2,583	1,900	400	9,059	9,079
31st July ..... ,,	59,738	44 17 6	2,893	390	2,146	3,744	2,200	650	12,023	8,889
30th June ..... ,,	56,604	44 17 6	2,909	416	2,545	4,745	1,600	300	12,315	9,976
			28,645	7,346	17,672	34,370	21,200	6,000	115,233	119,247
31st May 1892	53,965	46 7 6	2,841	664	2,288	1,215	2,150	500	9,658	9,521
30th April ..... ,,	53,828	45 12 6	1,968	1,284	2,422	2,968	1,500	100	10,242	10,725
31st March ..... ,,	54,311	46 5 0	2,260	1,667	2,012	2,013	1,750	300	10,002	12,472
29th February ... ,,	56,781	44 5 0	2,282	495	1,724	1,277	2,000	300	8,058	8,739
31st January..... ,,	57,462	44 12 6	2,809	893	750	1,571	1,525	350	7,898	6,480
31st December ...1891	56,044	46 15 0	1,720	1,575	2,049	3,305	1,200	600	10,449	12,045
30th November ,,	57,620	44 12 6	2,007	1,417	872	1,825	2,050	400	8,571	10,766
31st October... ... ,,	59,815	46 5 0	1,427	1,244	1,734	4,893	900	800	10,998	10,533
30th September ,,	59,450	51 2 6	3,045	929	2,181	1,975	2,950	700	11,780	11,959
31st August ..... ,,	59,829	52 10 0	3,845	1,593	1,436	2,262	2,300	350	11,746	9,899
31st July ..... ,,	57,782	52 0 0	3,983	439	1,338	1,656	1,400	700	9,264	9,107
30th June ..... ,,	57,325	55 5 0	2,515	1,518	3,388	3,253	1,400	500	12,536	13,469
			30,642	13,760	21,162	28,713	21,125	5,600	121,502	125,795

† Including Chilian and North American for all Europe.

TIN.

(From Messrs. A. Strauss and Co.'s Circular for May, 1894).

	30th April, 1894.	31st May, 1894.	31st May, 1893.	31st May, 1892.
	Tons.	Tons.	Tons.	Tons.
Straits and Australian spot	5,204	5,995	2,091	1,685
Ditto ditto landing	1,064	838	658	328
Straits, afloat	3,025	1,450	2,225	1,910
Australian, afloat	475	560	357	395
	10,768	9,843	5,311	4,318
Banca, on Warrants.....	443	1,203	761	1,206
Billiton, spot	1,149	1,851	437	501
Ditto afloat.....	1,240	700	927	1,066
Straits, spot in Holland	855	898	254	5
	14,455	14,443	7,590	7,096
Total afloat for United States	1,230	1,930	2,555	1,985
Estimated stock in America.....	450	655	7,615	2,725
Total	16,135	17,028	17,760	11,706
Prices of Straits and Australian	£71 7 6	£71 10 0	£85 15 0	£98 0 0
Deliveries during the month in London.....	1,730	1,250	1,361	1,189
Ditto ditto Holland.....	1,061	511	686	751
	2,791	1,761	2,047	1,940

Shipments during the month from Straits to London ... ... 1,100 Tons
,, ,, ,, Australia to London ... ... 350 ,,
,, ,, ,, London, Havre, and Holland to America ... 1,055 ,,
,, ,, ,, Straits to America ... ... 850 ,,
,, ,, ,, Australia to America ... ... — ,,
,, ,, ,, Straits to Continent ... ... 1,500 ,,

—	During 12 months ending May 31, 1894.	During 12 months ending May 31, 1893.	During 12 months ending May 31, 1892.	During 12 months ending May 31, 1891.	During 12 months ending May 31, 1890.
Shipments from Straits to London	25,172	23,315	18,194	14,673	15,942
Shipments from Straits to America	3,770	9,315	8,465	10,092	6,345
Shipments from Straits to Continent	13,196	4,855	5,075	4,858	4,250
Ditto from Straits to Europe and America ...	42,088	37,505	31,734	30,230	26,577
Shipments from Australia to London	4,672	4,380	4,285	5,116	5,311
Shipments from Australia to America... ...	400	600	800	850	850
Deliveries of Tin in London	20,719	14,421	16,657	17,677	17,747
Deliveries of Tin in London and Holland ...	27,352	22,837	23,911	25,889	25,328
Ditto in London, Holland, France, and U.S....	56,939	46,227	46,120	46,054	43,978

Banca in Trading Company's hands and afloat, 5837 tons.

PRICES: Straits and Australian, spot ... ... £71 10 0 three months ... £72 0 0
English Common Ingots ... ... 75 0 0 refined 77 0 0
Banca ... ... 74 15 0 Billiton 72 0 0

TIN TICKETING.

A TICKETING for tin ores was held at Redruth, on Tuesday, with the following result:—

VALUES OF ORES SOLD BY EACH MINE.

	Tons cwts.	Per ton.	Value.
Carn Brea No. 1	14 0	£36 17 6	£516 5 0
do No. 1a	13 0	37 0 0	481 0 0
do No. 1b	13 0	37 2 6	482 12 6
do No. 2	2 0	30 7 6	60 15 0
Dolcoath No. 1	14 0	42 2 6	589 15 0
do No. 1a.....	13 0	42 2 6	547 12 6
do No. 1b.....	13 0	42 5 0	594 5 0
Tincroft	16 0	38 15 0	620 0 0
do	15 0	39 0 0	585 0 0
do	3 0	22 9 6	67 8 6
Wheal Grenville No. 1 ...	30 0	43 7 6	1301 5 0
South Frances No. 1	12 0	41 0 0	492 0 0
do No. 1a.....	12 0	41 7 6	496 10 0
East Pool No. 1.....	19 10	37 2 6	723 18 9
do No. 2.....	2 0	18 10 0	37 0 0
Phœnix United No. 1.....	17 0	40 15 0	692 15 0
do No. 2	1 10	29 2 6	43 13 9
Killifreth	16 0	41 2 6	658 0 0
Wheal Basset No. 1	12 0	43 7 6	520 10 0
do No. 2	3 0	32 2 6	96 7 6
West Kitty	12 0	44 0 0	528 0 0
Wheal Agar.....	10 0	38 5 0	382 10 6
South Condurrow	8 0	43 15 0	350 0 0
Wheal Kitty	6 0	43 17 6	263 5 0
	277 0		£11,085 8 6

DURING May the output of the five productive mines on the Colar Gold Field, Mysore, was 16,543 ounces, showing an increase of 992 ounces as compared with April, and a decrease of 1379 ounces as compared with May of 1893. The production since the beginning of 1890 has been as follows:—

	1890. oz.	1891. oz.	1892. oz.	1893. oz.	1894. oz.
January	8,358 ..	10,186 ..	11,674 ..	16,844 ..	17,026
February....	9,547 ..	10,121 ..	11,780 ..	16,656 ..	15,803
March	9,422 ..	10,117 ..	11,579 ..	17,463 ..	16,080
April	7,853 ..	9,392 ..	11,813 ..	18,287 ..	15,551
May	7,861 ..	10,509 ..	12,488 ..	17,922 ..	16,543
June	8,287 ..	10,746 ..	11,847 ..	16,879 ..	—
July.....	8,081 ..	11,097 ..	13,277 ..	16,676 ..	—
August	8,079 ..	11,222 ..	14,854 ..	16,892 ..	—
September ..	8,352 ..	11,396 ..	15,529 ..	17,060 ..	—
October	9,360 ..	12,095 ..	15,922 ..	17,440 ..	—
November ..	9,770 ..	11,667 ..	15,942 ..	17,557 ..	—
December ..	9,962 ..	11,589 ..	16,435 ..	17,659 ..	—
	104,932 ..	130,137 ..	163,140 ..	207,135 ..	81,003

The outputs of the individual mines for the past six months have been:—

	Dec. oz.	Jan. oz.	Feb. oz.	Mar. oz.	April. oz.	May. oz.
Ooregum.....	6,577..	6,589..	5,905..	6,602..	6,008..	6,666
Mysore	5,010..	5,012..	4,709..	4,033..	4,184..	4,148
Champion Reef	3,037..	3,040..	3,099..	3,267..	3,294..	3,503
Nundydroog ..	2,525..	2,097..	1,728..	1,769..	1,692..	1,720
Balaghat.....	510..	288..	364..	409..	445..	506

THE following amounts of gold were entered on May 16, at the office of the Department of Mines, British Guiana:—

	Ozs. dwts. grs.	
D'Aguiar and Duarte	628 15 13	Cuyuni
T. F. Mordle	123 6 4	,,
July and De Vis	116 19 13	,,
J. B Nestore	55 9 11	,,
T. Fraser	27 16 10	Pot.
Stoby, Lucas, and Nurse	23 12 16	,,
Elliott and Cree	86 8 4	Con.
Perot and Parks	37 10 17	,,
J. H. French	30 1 17	,,
John Bristol..	1 0 12	,,
Wilson and Fotheringham ..	3 10 15	G. Crk.
Bagot and Jones	0 19 22	Ess.
Total	1,135 11 10	

THE directors of the Geldenhuis Deep (Limited) have been duly authorised to borrow £160,000 by means of debentures. These will probably bear interest at the rate of 6 per cent., and may be issued at 95 per cent. Shareholders will have an opportunity of applying for them, and proper provision will be made for redemption. Mr. H. C. Perkins has taken 24 samples of the Main Reef proper as exposed in the shaft, the width sampled varying from 54 inches to 75 inches, and the average assay was 12-6 dwt. of free gold per ton of 2240 lbs. Already about 65,000 or 70,000 tons of ore have been developed.

THE output of the Rand for April of 168,745 ounces was made up as follows:—111,716 ounces from the mills, 47,147 ounces from tailings, 5618 ounces from concentrates, 4122 ounces from unspecified sources, and 142 ounces from alluvial washings.

FORTHCOMING MEETINGS.

We shall be obliged if Secretaries or other Officials of Mining, Railway and other Companies will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings—whether statutory, semi-annual, annual, general or extraordinary, confirmatory or adjourned—in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Balance sheets, reports and other matter to be submitted at such meetings should, where possible, accompany the intimations of the meetings sent.

Name of Company.	Date.	Nature of Meeting.	Place.	Time.
N. West. of Uruguay Ry. Co.	June 11	General	Winchester Ho.	3.0 p.m.
Booysen Land and Mining...	June 11	General	Cannon-street	12 noon.
Wassau (Gold Coast) M. Co.	June 12	General	Cannon-street	12 noon.
Silver King Mining Co.	June 12	General	Winchester Ho.	12 noon.
Luipaards Viei Est. & G.M.C.	June 13	General	Cannon-street	2.0 p.m.
West Australian Pion. Syn.	June 13	General	Cannon-street	3.0 p.m.
The Cortes Mines	June 13	General	Cannon-street	2.0 p.m.
Van Ryn Estate and Gold ..	June 14	General	Winchester Ho.	12 noon.

REPORTS FROM THE MINES.

We find it necessary to announce that, owing to the vast numbers of mining reports, and items of mining intelligence which reach us invariably very late—up to, and frequently after the time of going to press—it is impossible to guarantee the insertion of all of them in the issue in which, in ordinary course they should appear. We always endeavour, however, to make this important feature as complete as possible, and if the secretaries of mining companies, mining captains, and others would kindly make an effort to let their reports, etc., reach us early on Fridays, when it is not possible to let us have them earlier in the week, their doing so would go far to ensure their insertion, and to promote the completeness of our Mining Intelligence.

BRITISH MINES.

DEVON GREAT CONSOLS.—Wm. Clemo, June 7: Watson's engine shaft; In the 172 fathom level east the lode is 4 feet wide, and is yielding 3 tons of copper and mundic ores per fathom. In the 160 fathom level east the lode is 4 feet wide, producing 1 ton of copper and mundic ores per fathom. In Bawden's winze sinking below the 148 fathom level east the lode is 5 feet wide, and is yielding 9 tons of copper and mundic ores per fathom for length of winze 9 feet. We shall sample to-morrow (Friday) 350 tons of copper ore for sale at Redruth on the 27th inst.

GREEN HURTH,—June 1: Annie's Vein: The south forehead is poorer than for some time past, worth for lead 1 ton per fathom. The heading in the back of the above level is looking better, worth for lead 2½ tons per fathom. The south drivage from the sump on Annie's vein, this working is yielding its usual quantity of ore worth 3 tons per fathom. South-west branch above 30 fathom level, the south forehead is without change since my last report worth 1 ton per fathom. The heading in the back of the above is poorer than usual, worth 1 ton per fathom. 30 bings of ore have been delivered to the Nenthead Company this week.—W. Gray.

LEADHILLS.—W. H. Paull, May 29: Brown's Vein: The 160 fathom level south of Jeffrey's shaft is in a vein 4 feet wide yield ing a little ore, but not to value. The 160 fathom level north of Wilson's shaft is in a large vein containing spar and occasional stones of ore. No. 2 winze below the 145 north of Wilson's shaft, vein is 4½ feet wide, worth 35 cwts. of ore per fathom. In the cross cut eastwards at the 145, 36 fathoms behind north end, we have a small branch of spar, spotted with ore. No. 1 stope above 145 north of Jeffrey's shaft is worth 50 cwts. of ore per fathom. No. 2 stope above ditto is worth 25 cwts. of ore per fathom. The stope above the 130 north of Jeffrey's shaft is producing 25 cwts. per fathom. The 115 fathoms level north of Jeffrey's shaft contains a little ore, but not to value. No. 1 stope above 115, north of ditto, yields 25 cwts. of ore per fathom. No. 3 stope is worth 28 cwts. of ore per fathom. There is no change to notice in the cross cut eastwards at the 100 south of Wilson's shaft. The 100 fathom level south of Wilson's shaft the vein is 3 feet wide showing nice spar, but no ore. The 100 fathom level south on hanging wall, south of Wilson's shaft, the vein is 2½ feet wide, and looks promising. The stope above drift over 100 south of Wilson's shaft is worth 35 cwts. of ore per fathom. Stope above the 85 north of winze south of Wilson's shaft is worth 30 cwts. of ore per fathom. No. 1 stope above the 85 south of Wilson's shaft, the vein is 4 feet wide, worth 65 cwts. of ore per fathom. In the 70 crosscut eastwards, 4 fathoms behind south end, several joints have been intersected, but nothing as yet of note. The stope above the 50 south of winze the vein is 3 feet wide worth 40 cwts. of ore per fathom. Stope below 35 south of Flat rod shaft the vein is 3½ feet wide, and will yield 45 cwts. of ore per fathom.—Sarrowcole Vein: Gripp's level south of George's Roust vein is in a vein 3 feet wide, and looks promising, but without ore as yet.

— W. H. Paull, June 4: Brown's vein: Fair progress continues to be made in driving north and south at the 160 fathom level. The vein in the forebreast of the 160 south of Jeffrey's shaft is 4 feet wide strongly mixed with spar and lead ore valued at 15 cwts. per fathom. The 160 fathom level north of Wilson's shaft is going forward in a vein over 4 feet wide, composed chiefly of stone and spar with spots of lead ore at times. The crosscut east at the 100 south of Wilson's shaft is being steadily pushed ahead towards Raik vein, ground rather stiff for exploring. As you are aware nothing has been done in the several other bargains during the past week, consequently there is no change to report as to value of vein, &c., operations have, however, been resumed this morning in the different bargains with one exception—viz., the stope over the 50 fathom level south of winze, and south of flat rod shaft from which stope three of the men recently employed there have left. The drawing, dressing, and all surface works are being proceeded with regularly.

NEW MINERA —Mining report for the two weeks ending June 1: —275 yard level: Stope near forebreast two men on tribute, lode worth 3 tons blende per fathom, estimated to produce 6 tons per month. Stope in bottom of level west of crosscut four men on tribute, lode worth 3½ tons lead ore and blende per fathom, estimated to produce 10 tons per month. 295 yard level west of winze two men on tribute, lode worth 2½ tons blende per fathom, estimated to produce 5 tons per month. West of sump six men on tribute, lode worth 2½ tons blende per fathom, estimated to produce 15 tons per month. West of sump in bottom of level four men on tribute, lode worth 4 tons blende per fathom, estimated to produce 16 tons per month. 315 yard level driving east of main crosscut, a nice string of lead ore cut into during the last fortnight and improving. West of incline shaft four men on tribute, lode worth 3 tons blende per fathom, estimated to produce 10 tons per month. East of incline shaft, six men stoping in the bottom of the level, lode worth 4 tons blende per fathom, estimated to produce 20 tons per month. West of winze two men on tribute, lode worth 2½ tons blende per fathom, estimated to produce 5 tons per month. Near forebreast west four men on tribute, lode worth 2½ tons blende per fathom, estimated to produce 9 tons per month.—Dressing: 59 tons blende sent off since last report, making the total quantity sold 4135 tons blende, and 1708 tons lead ore.

PRINCE OF WALES.—S. Roberts, J. Prowse, June 6: We have no change worthy of notice in the cross cut since our last report; the general character of the ground and other indications are much the same. We are still pushing on the drivage as fast as possible.

WEARDALE.—Report on Weardale company's mines for week ending June 2: Groverake: Adamson's drift west, vein 6 feet wide of spar and plate rider, rather poorer and slower to drive, and worth 14 cwts. per fathom. Groverake cubic fathom stopes worth 14, 12, 12, 14, 14, 14, 12, 12, 12, and 8 cwts. per fathom. The tribute men have raised 24 bings during the week.—Boltsburn: Crosscut south from Watts's level to prove the Flatt's. This is principally limestone mixed with rather quick strings, hard to work. Stope above Watts level in vein worth 20 cwts. per fathom. Stopes in north and south Flatts worth 20, 26, 34, 32, 30, 20, 26, 16, 24, 18, and 14 cwts. per fathom.—Greenlaws: Stopes in Nattrass Gill drift worth 14 and 14 cwts. per fathom. Lees sump, stopes worth 12 and 24 cwts. per fathom. The tribute men have raised 30 bings during the week in Greenlaws vein and strings.—Sedling: The 64 level east has been driven 44 5-6 fathoms, vein twitched, end worth 14 cwts. per fathom. The crosscut north from the bottom of shaft is now in 17 4 6 fathoms. We are now through all the strength, and it seems inadvisable to continue this further. We have driven 2½ fathoms east from bottom of shaft in the south vein, which is 4 feet wide; matrix much improved, chiefly fluor spar, some rider, and a little ore. Stopes above 64 level east worth 14, 16, 16, and 16 cwts. per fathom. Stope above 64 level west in plate and grey beds, worth 16 cwts. per fathom. Stope in Stobb's drift worth 14 cwts. per fathom. Ore raised for week, 78 tons; ore dressed for week, 107 tons; ore and slag smelted for week, 144 tons, producing 76 tons of pig lead.

WHEAL FRIENDLY (St. Agnes).—June 5: In driving east on the Pink lode during the past week, we have driven through a crosscourse 4 feet wide, which has heaved the lode a little south, but we have to-day reached the north part of the lode, and have broken some rich stones of tin from it, In a few days we shall have cut through the lode, when I shall be able to give the size and value of it. In the rise behind this end the lode is 5 feet wide, producing 30 lbs. of tin to the ton of stuff. Around the crosscourse we have now reached, we have the lode standing about 50 fathoms high.—(Signed) N. Vivian.

COLONIAL, INDIAN, AND FOREIGN MINES.

BONNIE DUNDEE.—Mine manager's report for fortnight ending April 21: Underlie (No. 1) shaft, No. 7 south-west level, have driven west of crosscut 14 feet, total distance 30 feet. Reef 15 inches good looking stone, heavily mineralised. Winze sunk 23 feet; total depth 114 feet. Reef averages 12 inches. No. 9 south-west level, reef from 6 inches to 18 inches in hard formation. New (No. 3) shaft (vertical) sunk 21 feet for fortnight, total depth 547 feet (529 feet timbered). Trial crushings, No. 7 south-west level winze 11 tons 1 cwts., 13 ounces 15 dwts. No. 9 south-west level, back of cross cut 21 tons 3 cwt., 33 ounces.

MILL'S DAY DAWN UNITED.—Mine manager's report for fortnight ending April 9: No. 8 level west extended 13 feet, total from side of shaft 117 feet. No reef in face at present. The shaft winze is deepened 8 feet, at which point we holed the hanging wall winze. Total depth sunk 33 feet. No. 7 level west extended 7 feet, carrying 10 feet of reef of good quality. In the stopes the reef varies from 4 to 12 feet thick of good quality. No. 7 level west hanging wall is driven 7 feet, carrying 2 feet of reef, not showing much mineral at present. Have commenced to take off the leading stope over this level from No. 1 winze. The reef from the above winze east varies from 1 to 4 feet wide of fair quality.—No. 7 Level East: Have driven cross cut a further 21 feet, total from side of level 40 feet.—No. 6 Level West: The footwall reef varies from 1 to 3 feet thick of fair quality, showing the quality to be improving as the level advances east. In the stopes over the eastern level the reef ranges from 1 to 3 feet of good quality.—No. 5 Level West Stopes: The reef varies in thickness from 1 to 5 feet of fair quality. Over the eastern level the reef will average about 4 feet medium quality. —No. 4 Level West: The reef ranges from 1 to 3 feet thick of fair quality. The stopes on the eastern side will average about 5 feet wide fair quality.

MOSMAN.—Mine manager's report for fortnight ending April 12: North Australian Mine: South Byerley level cross cut extended a further 10 feet, total length from level 64 feet; there is no reef, and the rock is hard. South Byerley level winze sunk 10 feet, total depth 140 feet; there is no reef.—Stopes: The various stopes average 9 inches of quartz of varying quality; the rock is very hard. Stone raised 65 tons, worth, say, 1 ounce 12 dwts. per ton. Stone crushed 388½ tons, yielded 725 ounces 8 dwts. 11 grains of gold.—Wyndham Mine: No. 13 level north extended 13 feet, total from shaft 164 feet; the quartz has almost cut out. No. 8 level winze sunk 20 feet, total depth 30 feet, reef about 12 inches thick, worth, say, 25 cwts. per ton.—Stopes: No. 13 level north 10 inches of stone carrying very little gold, but it may improve. No. 11 south reef from 8 to 12 inches thick, worth 12 to 14 dwts. per ton. No. 12 level reef 6 inches to 3 feet thick, worth 8 to 9 dwts. per ton. No. 11 level north reef averages about 10 inches, worth, say, 1 ounce per ton. No. 9 level reef 12 inches thick, getting very short, worth, say. 1½ ounce per ton. No. 8 level reef very bunchy, say, 12 inches thick in largest part, worth about 1 ounce per ton.—Stone Crushed: On the 7th inst. 590 tons of quartz was cleaned up for 358 ounces 19 dwts. 19 grains of gold.

PESTARENA.—W. Henwood Trelease, T. H, Messrs, June 4: Ends: The 55 end east on No. 1 lode is yielding 8 tons per fathom at 2 ounces per ton. The end is now 3 metres wide, the lode having split into branches as it did at the 70 fathom level. In the 70 east there are now two lodes with opposite dips, averaging 80 centimetres in width; stones of pyrites are occasionally met with, bnt at present there is nothing to value. The 70 west on A and B lodes is still in the cross course. The 140 west on No. 5 lode is in lode 40 centimetres wide showing a continuous branch of solid pyrites 10 centimetres wide, yielding 1½ tons per fathom at 1 ounce 10 dwts. per ton.—Cross cuts: At the 70 north the dip of the rock is apparently changing from north to south, and its appearance is more favourable. In another cross cut at the 70 a branch has been passed through whose dip corresponds with that of the flat lode that cut off the ore in the 70 west on No. 1 lode: it is again in hard schist. The 130 has passed through a branch 40 centimetres wide which showed a little pyrites on the footwall. A winze at the 70 west on No. 1 lode is about to be started, where the lode is worth 12 tons per fathom at 2 ounces per ton. Stopes on No. 1 lode, at the 55 east, there are two stopes yielding 10 tons at 2 ounces, and 4 tons at 1 ounce 10 dwts. per ton. At the 70 east two stopes yielding 5 tons at 1 ounce 15 dwts., and 4 tons at 2 ounces, and at the 70 west one stope giving 4 tons at 1 ounce 10 dwts. At the 90 east a stope is producing 6 tons per fathom at 1 ounce 10 dwts. On the Caunter lode the stopes yield as follows: 55 east, 2 tons at 1 ounce per ton; 70 west, 5 tons at 1 ounce 10 dwts.; 90 east, 3 tons at 1 ounce 5 dwts.; and another at this level 2 tons at 1 ounce. Stabioli: In the Anza level north the lode is in two parts, one of which carries a small branch of pyrites on the footwall, assaying 5 dwts. The 25 metre level above zero south shows two good walls, 1·40 metres apart; the footwall carries a small branch, chiefly of quartz, and the hanging-wall a branch of pyrites assaying 1 ounce 16 dwts.—Kint Concession: The driving of the old adit level has been commenced.—Machinery: Owing to one or two breakages the 150 fathom level has not yet been forked. All the surface machinery continues to work satisfactorily.

POORMAN CONSOLIDATED.—The following report has been received from the manager at the mines, under date May 13: On May 7 I wired you: Struck a rich body of ore against the footwall of the Oso in Belle Peck. Average width of the vein is 1 foot trial run 10 cwts., shows assay value of ore $1800 per ton, saving by the new process 95 per cent. Employees have been reduced 50 cents. per diem. And on May 13 the following; Mine is looking better, Mill working splendidly. Six Belle Peck assays average gold $480, silver 300 ounces to 350 ounces per ton. On east wall a streak of ore 4 inches. An assay of this sample gives gold $1230 and 550 ounces of silver per ton. As per my telegram of May 7 we encountered a very rich body of ore on the east or footwall of the Oso vein in Belle Peck tunnel of a width of 1 foot, of which 4 inches assays $1232 in gold and 551·20 ounces of silver. The average assay of this 1 foot of ore is $864 in gold and 536 ounces of silver per ton, as per the assay returns I enclose you herewith. This was the portion of the vein we have been expecting to find on the east wall; but it is very much richer and much stronger than we anticipated. We are now south on the vein 31 feet and north 25 feet from the crosscut, showing a continuous vein the entire distance, varying in width from a few inches to 18 inches. The work is necessarily slow, on account of air, and we are only able to work two men by day until such time as the roads are in condition, so that we can get in a fan and engine. We shall not be able to mill any of this high grade ore, nor to put up any stopes for some time. In the meantime, we will drift both ways to determine the extent of the vein, and, as per our surveys, we should have a distance of 200 feet north and 150 feet south to run on this chute of ore, as has been demonstrated by former workmen in the Oso tunnel, 345 feet above us. In the No. 3 tunnel the stopes are all in ore of a very fair character. The rich ore body in No. 1 stope north is 12 inches; south it has gone to the east wall, and we have 10 inches of very high grade ore. No. 5 stope north shows a body of ore 3 feet, south 3 feet 6 inches of good milling ore. No. 6 stope of the same kind and character as No. 5. We have arranged these stopes by putting the chute in the centre, and placing two miners—one north and the other south—and allowing them 25 feet, so when I reported the stope as being 3 feet or 3 feet 6 inches, it is for 25 feet to the face of each stope, making each stope 50 feet in length. In the face of No. 3 tunnel we are driving south as fast as possible, and the entire face is in ore of the same grade as the stopes. This drift has been extended 18 feet, giving a total length of 1848 feet, and I calculate the distance to be run to strike the Blue Dyke, which made the rich chute of ore on the surface, about 100 feet. The mill, as per assays enclosed, is absolutely saving everything in the ore. The machinery and concentrators are all working most satisfactorily. We have been delayedion account of the rough state of the road. Not being able to keep the mill running continuously, and to keep the plates and amalgam in a soft condition, I have placed a 60-mesh screen instead of a 50-mesh, until we are able to get sufficient ore hauled to the mill to work to its full capacity. We are at present not working more than one-eighth the amount of ore we shall crush the moment we are able to get it to the mill. This I hope to be able to overcome by the time of next report. Acting under the instructions of the board, I posted a notice of the reduction in wages on May 1, and all employees now have been reduced 50 cents per day. I am pleased to say that the men looked upon it as the natural outcome of the reductions made by all other mines. There is no discontent among them, and they are working as faithfully and taking the same amount of interest as formerly. The reduction of wages was decided upon at a meeting of the board of directors, dated April 30. This company and one other were the only companies maintaining the old rate of wages in Idaho. All other properties in Idaho and the neighbouring States reduced the miners' wages months ago, hence our employés looking upon the reduction in the sensible light they do. The following cable report has been received from the mines, under date June 7:—"The mill is not working to its full capacity, owing to the scarcity of fuel; it has run 20 days, of which 10 days was in ore of very low grade. Partial clean-up from 200 tons of ore crushed, $8000 in concentrates and bullion; estimated expenses, $2500; estimated profit, $5500. Start working mill to its utmost capacity, and milling rich ore, June 10. Estimated profit for the month of July, $35,000. Poorman stopes still hold good. Oso ore-body in the Belle Peck, struck on May 7, continues in high-grade ore, assaying $800 per ton. Have sunk 2 feet on (this) rich ore-body. assays averaging $1000 per ton."

QUEEN'S BIRTHDAY UNITED.—The following mail advice has been received from Mr. W. T. Hansford, the company's local secretary at Dunolly, dated April 30: Main Shaft: The pumps keep down all coming water at seven strokes per minute. No. 5 level extended 6 feet reef stone about 4 feet wide. Have started a crosscut for the wall as indicated in my last report. Mr. Kent has completed his survey, copy of report I herewith enclose, in which you will note the important fact that Betheras lost the lode, which he, Kent, says is east. The local committee at their meeting to-day decided that directly the levels, &c., are cleaned up, that the crosscut east must go in. The work of cleaning up is rather important, as owing to long stoppage, there is about 1 foot in depth of slum to be cleared away; next we shall have to purchase £35 worth of air pipes and fix same. The report of Mr. Kent has quite opened up a new vista before us. If we find the lode here as expected, our future is assured from this point alone.—Centre Shaft: This shaft all cleared from bad air, shaft lined to the bottom and skids fixed. The committee at their meeting to-day gave orders for engagment of an extra engine driver for the machinery, and a second shift of men to go below, of course, adding to pay sheet, but the developments justify it. Belgium: In my last I reported our anxiety over the developments. When Mr. Kent saw what we were doing he approved, and so we continued to open up on what appeared to be the course of the lode 115 feet from the shaft. The stone showed signs of widening out as the drive went in, which encouraged us greatly. You may judge our satisfaction and pleasure when last night, at 10.30, the men, upon firing the last shot, found the lode had suddenly increased a foot in width extra, and showed some excellent stone, samples of which were brought in. Of course it is very early yet to judge the value of our strike, but we regard it as most important, for now we have proved that good stone exists at the 100 feet level, and now we have it at the 200 feet level, which, we think, pretty well establishes the Belgium as a golden mine, untouched except at the surface, with a great future before it. Our next report will, I trust, be confirmatory of our views.—Water, upper level: I may also add, as a confirmation, that we have struck the Belgium lode, that the water in the level above has gone down 17 feet; this is proof positive that we are on the right track, and I am glad to say that we are able, so far, to master the water with the whim. It was a bit of good management to put it up when we did. Had we not done so we should have been swamped out now.

SPITZKOP FARM.—Produce for the month of April, 108 ounces, value £378 17s. 6d, from 379 tons, which the manager considers highly satisfactory. Report for week ending May 5: Ten stamp mill: No crushing has been done as we are busy putting on the new cams. I think we shall be able to begin crushing again in a week's time.—Reef Hill: Getting out and hauling ore as usual from the creek below the mill.—Hydraulic: Two monitors worked 5½ days of 10½ hours each during the week. The wash has been very hard during the week, and is now about 10 feet in thickness. Old water race is completed cleaning out. The manager adds: The hydraulic clean-up will commence when the mill starts again.

STANHOPE.—The manager's report for the month of April gives the following:—The tonnage mined was 2100, and milled 1800, which yielded 975 ounces smelted gold; battery running 27½ days. With the 300 tons gained this month there is now nearly 1000 tons of good quartz at grass.—Cyanide Works:—The tailings treated consisted of 1170 tons, from which was obtained 456 ounces 1 dwt. of bullion. The total increase for month, cyanide and battery, is 191 ounces 9 dwts.

TRANSVAAL GOLD EXPLORATION AND LAND.—Summary of mining operations for March and April:—Total ore extracted at all places 2782 tons.—Theta: Drivage, 476 feet. The deposit averaged 34 inches thick; ore extracted, 1416 tons; average assay value of 900 tons was 3 ounces 13 dwts. per ton.—Beta: Drivage, 473 feet; ore averaging 7½ inches thick; extracted, 346 tons; average assay value, 1 ounce 5 dwts.—Nu: Extraction, 138 tons; average assay value, 3 ounces 3 dwts. per ton. In one of the drives the deposit was 24 inches thick, and carried good gold.—Chi south: Drivage, 1059 feet; deposit averaging 23 inches thick; ore extracted, 589 tons; assay value varied from 1 ounce 1 dwt. to 5 ounces per ton.—Prospecting: At Psi drivage was being continued on ore averaging 9 inches thick; 55 tons were extracted; average assay value, 3 ounces 9 dwts. per ton. Work of prospecting will for some time be restricted, a portion of the labour being transferred to accelerate the development of the mines. Work at the new battery site was being energetically carried on, and the concrete foundations had been put down. The making of the tramroad from Theta to Kameel's creek was begun, and fully 800 yards (equal to one half) of the path made. Figures showing the actual produce and average assay of the ore extracted during March and April will be published as soon as received.

ALMADA AND TIRITO.—Fortnightly report, May 12: Dios Padre: The 350 feet level driving north the lode is large and yields small quantities of silicate of copper containing 40 ounces silver per ton. The 250 feet level driving north shows occasional stains of copper, but of no value. The 250 feet level driving south is on a massive lode of very hard quartz, yielding at times some good copper glance.—Stopes: The stope back of the 156 feet north of Cruz Verde yields 2 tons of ore per fathom, containing 42 ounces silver per ton. The stope bottom of the intermediate below the 12 fathom level north of Balvanera shaft is yielding fair quantities of ore, containing from 25 to 30 ounces silver ton.—100 Lode: The stopes back of the 24 fathom level and back of the 12 fathom level north of No. 14 winze on the 100 lode are yielding ore in paying quantities.

AUSTRALIAN BROKEN HILL CONSOLS.—The mining manager reports by mail for the fortnight ended April 26:—Block 96: Main shaft 280 feet level east, prospecting drive No. 4 rise driven 5 feet, total 39 feet. Lode still rising and rather smaller, without further change.—280 west prospecting drive: Stopes below level driven 11 feet. Have raised a limited quantity of high grade lead ore, but at present the lode does not look so well. The ore makes in isolated bodies, composed of galena, grey ore, and canary ore. Assays of the last ore raised have yielded as follows:—Average sample of galena equals silver 56 ounces 15 dwts. 4 grains and 73 per cent. lead. Carbonate of lead and canary ore, &c., equals 67 to 119 ounces of silver and 68 to 72 per cent. lead. Incline sunk 2 feet 6 inches, total 547 feet. Lode rather flatter and well defined. Sinking retarded by inflow of water. A little fahlerz and galena are showing in the lode. No. 5 level west driven 6 feet, total 30 feet. Lode becoming more compact, occasionally showing a little galena. No. 5 level east driven 9 feet, total 25 feet 6 inches. Without change. No. 4 level east driven 10 feet 6 inches, total 189 feet. Lode well defined, showing a little fahlerz and galena. Water rather stronger. No. 3 level east driven 11 feet. The lode here is large, consisting of calcite and carbonate of iron, yielding a little fahlerz and galena.—Surface hands: Have had No. 2 boiler and flues cleaned on contract.—Note: The quantity of rock mined during the fortnight was 2034½ cubic feet.

BALAGHAT-MYSORE.—Jos. Pryor, May 16: Ogle's shaft: I am pleased to say not only has all the water been drained throughout the mine, but that all our points of operation are again in full working order, and that in addition to completing the cutting of the necessary ground for the cistern at the 800 feet level, we have also resumed the sinking of the shaft which is now 11 feet 6 inches below the level, the lode is of a promising appearance, but as yet it does not give any quartz to value. The 800 feet level north has not only been communicated with the levels from the bottom of the No. 1 winze at the 730 feet level, but has been extended some distance beyond them, and is now 130 feet 9 inches from the shaft, the quartz is fully 18 inches wide, and assays 4 ounces 13 dwts. 18 grains of gold per ton. At about 60 feet from the shaft we have commenced sinking a new or No. 1 winze, it is now down 4 feet below the level, and yields quartz of over 1 foot wide, which assays 2 ounces 1 dwt. 1 grain per ton. A stope in the back of this level produces quartz of 1 foot wide, and assays 1 ounce 9 dwts. 20 grains per ton. The levels north and south from the bottom of the No. 1 winze at the 730 feet level north have been communicated with the main or 800 feet level north of the shaft; the quartz varies from 1 foot to 1 foot 6 inches, and assays from 1 ounce 2 dwts. 9 grains to 4 ounces 0 dwts. 6 grains per ton. This section of ground is now being stoped from both the north and south ends of the winze. The stopes in the bottom of the 730 feet level north yield quartz of from 6 inches to 1 foot wide, and assays on an average 2 ounces 3 dwts. 1 grain per ton. The stopes in the back of this level produce quartz of 9 inches of 1 foot wide, and assay on an average 1 ounce 10 dwts. 1 grain per ton. The stopes in the bottom of the 660 feet level north yield quartz of from 9 inches to 1 foot wide, and assay on an average 8 dwts. 9 grains per ton.—In addition to clearing Haine's shaft of water, &c., we have also deepened it to about 70 feet below the level, and I am glad to say also started driving the new, or 870 feet, levels north and south of the shaft. The quartz in the shaft and both of the levels is from 1 foot 3 inches to 1 foot 9 inches wide, and assays respectively 7 dwts. 14 grains, 4 dwts. 16 grains, and 14 dwts. 22 grains per ton. We purpose pushing on with these drives, which are now about 3 feet each from the shaft, as fast as possible. At the same time shall also proceed with all possible speed with the sinking of the shaft below these levels. The 800 feet level south has again been cleared, and the ground secured, and its driving once more resumed. The end is now 198 feet from the shaft; it produces quartz of over 1 foot wide, and assays 6 dwts. 12 grains per ton. We also cleared the debris from the No. 1 winze in the bottom of this level, and again resumed its sinking; it is now down 26 feet below the level, it yields quartz of 1 foot wide, and assays 5 dwts. 14 grains per ton. The quartz in the north and south levels at the bottom of the No. 2 or midway winze at the 730 south is from 9 inches to 1 foot wide, and assays 17 dwts. 17 grains and 2 dwts. 19 grains respectively per ton. We expect to communicate these levels with the main or 800 feet level south of the shaft within the next month. The stopes in the back of the 800 feet level south produce quartz of from 1 foot to 1 foot 6 inches wide, and assay on average 15 dwts. 5 grains per ton. The stopes in the bottom and back of the 730 feet level south, yield quartz of from 1 foot to 15 inches wide, and assay on an average 9 dwts. 16 grains per ton.—Tennant's shaft: This shaft has been sunk 11 feet or 38 feet 6 inches below the 350 feet level, the quartz varies from 2 feet 6 inches to 1 foot 6 inches wide, and assays 5 dwts. 14 grains per ton. The 350 feet level north has been advanced 14 feet 3 inches or 63 feet 9 inches from the shaft, the quartz varies from 1 foot to 2 feet wide, and assays 4 dwts. 16 grains per ton. At about 18 feet from the shaft we have just started a rise in the back of this level, the quartz is fully 3 feet 6 inches wide, and assays 9 dwts. 5 grains per ton. The rise is now up 5 feet 9 inches above the levels. The 350 feet level south has been driven 18 feet 6 inches or 68·9 feet from the shaft, the quartz varies from 3 feet to 1 foot wide, and assays 3 dwts. 17 grains per ton. The skip road is now completed to the 350 feet level and the skip is being used daily for hoisting the dirt. We are now busily engaged preparing the skip plat below this level, and hope soon to have it in full working order.

BONANZA.—The following report has been received from the manager at the mines under date May 13: Since writing you on the 28th ult. work has progressed at the mines steadily and satisfactorily. In raise No. 1 we have driven 25 feet, having an average of 14 inches of high grade ore, and at present there is every indication that we shall shortly be in the large ore body already cut by raise No. 2. In raise No. 2 we have driven 35 feet. The raise is still all in quartz. This quartz all prospects exceedingly well, and should not mill less than $12 to $15 per ton, while that which we necessarily leave in the roof in order not to make the raise too large is of much higher grade. In tunnel No. 2 we have driven 45 feet, and shall complete the connection with raise No. 2 within four weeks. In tunnel No. 1 we are stoping about 100 tons of the ore exposed by earlier workings in order to test its value when we start the mill. This I hope to do not later than the 1st of June, when I shall have the mine in condition to turn out a large quantity of very good ore at small cost.

CAPE COPPER.—Captain Henwood, April 30: Ookiep: The rock in the 130 fathom level east and west of north cross cut is yielding stones of copper ore, but not sufficient to value. The ground in the 92 fathom level east of south cross cut, south of 46 winze, for the present is unproductive. The drive in the back of the 92 fathom level south east of 42 winze is producing about 1 ton of copper ore per fathom, and the stope in the bottom of this drive is yielding 8 tons per fathom. The intermediate level between the 80 and 68 fathom levels has fallen off in yield; at the present time it is only worth 1 ton of copper ore per fathom. The 80 fathom level south east of new shaft has been temporarily suspended for the purpose of proving a branch of copper ore in depth, recently passed through in this driving. The ground in the 48 fathom cross cut south of east level is spotted throughout with copper ore, but not to value.—Captain Henwood, April 30: Trial Mines: Nababeep South: The rock in bottom of shaft [is sinking below the 59 fathom level is composed chiefly of gneiss. Apparently we are through the productive ground in this part of the mine which is dipping north east. We have 13 feet 6 inches more to sink: when completed will make 18 fathoms below the 59, deep enough for a 15 fathom level, and 3 fathoms to spare for plat and fork.—Spectakel: The drive in the back of the 27 fathom level south east of No. 1 flookan course is worth 2 tons of copper ore per fathom, and the stopes throughout the mine are yielding their usual quantities of copper ore.—Copperberg: The stope in adit level east of No. 1 south cross cut is yielding 5 tons of copper ore per fathom. The rock in bottom of Trial shaft sinking below the surface is chiefly gneiss.—Returns for April: Ookiep, 1950 tons of 17 per cent; Spectakel, 150 tons of 28 per cent.—Arrival at Swansea: The *Ranmoor* with 1760 tons of ore and 880 tons of regulus.

FORBES REEF.—The mine manager reports progress for the month of April, under letter dated May 3 as follows: Main shaft north drift, 20 feet; main shaft east drift, 4 feet 6 inches; main shaft south crosscut, 20 feet 6 inches; total, 45 feet. Several open cuts (prospecting) different parts of concession. Open works, 1750 tons mined and sent to No. 1 mill. Open works, 1250 tons mined and sent to Avalanche mill. Open works, tram lines repaired and extended. Battery, No. 1 mill overhauled and repaired. Battery, Avalanche mill overhauled and repaired. Avalanche engine overhauled and repaired. Avalanche new 10 stamps completed and started. No. 1 mill ran 21 days crushing 1750 tons. Avalanche ran 18 days and new stamps 6 days crushing 1250 tons. Total, 3000 tons. Gold won: No. 1 mill, 50 ounces 6 dwts. 2 grains; Avalanche, 86 ounces 13 dwts. 12 grains; Avalanche iron, 28 ounces = 164 ounces 19 dwts. 14 grains. Wagons and roads kept in good repair. Cattle in fair condition. Wood cutting: Firewood, usual supply cut, logs for timber new avalanche stamps.

HARRIETVILLE.—Fortnightly report of Mr. T. G. Davey, superintendent, dated 27th April: Mons Meg Mine: Drive north of main winze 100 feet below tunnel D advanced 20 feet, total 76 feet. Lode matter 6 feet wide, but very poor. A slide dipping at an angle of 45° to the north has been encountered here, which may have thrown the main shoot in that direction. This will be ascertained as driving progresses. There is now a slight influx of water in this end. South drive at same level extended 9 feet, total 56 feet. Lode 6 feet wide, of which 2 feet is auriferous, although of low grade, assaying 4 dwts. per ton. Rise at back of drive north of tunnel J advanced 9 feet, total 40 feet. Lode 18 inches wide, and somewhat auriferous. Lode in stopes on Mons Meg shoot at tunnel D 15 feet wide, consisting of sandstone and quartz veinlets, which are occasionally highly auriferous. Average assay value 8 dwts. per ton. No. 2 stope at back of same level lode 12 feet wide, assaying 13 dwts. per ton. Underhand stope at 290 feet level below J. Lode 3 feet wide, assaying 6 dwts. per ton. Underhand stope at 44 feet level lode 6 feet wide, assaying 4 dwts. per ton. Stope on hanging wall of north shoot at back of tunnel J vein 3 feet wide, assaying 4 dwts. per ton. We are also stoping on a vein 3 feet wide on the footwall, but this so far is very poor. The rock between the two veins is barren.

LA YESCA.—In his report, dated May 9, Captain Michell states: —San Miguel Mine: During the first week of the past fortnight progress was delayed in repairing the timbering, &c., of the tunnel, owing to the decomposed character of the ground, but the improvement since has been of such a nature that the distance advanced is much greater than I anticipated. From my examination yesterday I fully expect by the time this reaches you the tunnel will be made good up to Wills' vein, beyond which no timbering is required. The former workers, in driving from this vein to the end, lost considerable levels, and this will have to be made good. When completed, the end will be set to intersect the San Miguel gold bearing vein. The ventilator and tubing are fixed in the tunnel, and I am glad to say are working well, in fact, up to the point where the pipes are laid the tunnel is comparatively cool. I can almost see the end of the repairs to this tunnel, and am pleased to say it will then be in first class condition, and will require but little cost for many years to come.—Mill House: The excavating work, with the exception of a few more yards to be cut away in line with tramway, is finished. The boiler room is completed and in a fit state to receive the roof, and the clean-up room is in a similar condition. The engine, pan, and settler rooms are ready to receive the machinery. The masons are now engaged in building the side walls of the third floor of the mill house.—Machinery; Mr. Bryan is using every endeavour to make good, replace the missing parts, and get the various castings ready to be placed in their proper position. In conclusion, I would state that all other work is going on in the usual manner, and I think you have every reason to congratulate yourselves on the large amount of work already done. Further, in a very short period, the tunnel will be running towards the San Miguel gold bearing vein, and when the intersection takes place you may reasonably look forward to having one of the best properties in the territory of Tepic.

MEYER AND CHARLTON.—From the report for April: Profit for month, £4139 4s. 10d. Included in the month's output was 19·20 ounces bullion (·892 fine) produced from a test crushing of the main reef at the fifth level. The main reef leader is also very rich at this level, which is now well advanced in development, showing the different lodes to be improving with depth both in size and value. Shareholders will have noticed from the various reports that crushing operations have been hitherto confined to the leader and south reef lodes, but the trial crushing of main reef testifies to the additional proved value of the mine, and the necessity of milling on a greatly increased scale. It is intended to continue crushing with the present battery, as well as with the proposed new mill, which, in view of the extremely favourable indications of the extensive main reef body, and the well-developed condition of the mine generally, must shortly be erected. Speedy progress is being made with the main incline shaft, which has already been sunk and timbered to a depth of 110 feet. The company's cyanide works are completed, operations for the treatment of tailings direct from the mill having been commenced at the beginning of the current month, the results of which will materially increase the profits.

MYSORE REEFS.—Fortnightly report of Captain Scantlebury, mine agent, dated 16th May: Underlie Shaft: The 250 feet level north has been advanced 16 feet 6 inches, now 16 feet 6 inches from shaft. The rock is very hard, and the lode pinched. There is a little quartz against the hanging wall, assaying 3 dwts. 6 grains of gold to the ton. 250 feet level south has been extended 13 feet 6 inches, now 13 feet 6 inches from shaft. The lode is pinched, but producing a little quartz and pyrites, assaying 2 dwts. of gold to the ton. We shall soon have an improvement in these ends.—Vertical Shaft: The 200 feet level north has been advanced 14 feet, now 49 feet 6 inches from crosscut. The lode in the present end is 3 feet wide, composed of quartz and a little iron pyrites. Two assays have been made with the following result:—No. 1 sample, 15 dwts.; No. 2 sample, 2 ounces 3 dwts. 17 grains. The lode never looked so well as it is at present. 200 feet level south has been extended 14 feet 6 inches, now 49 feet from crosscut. The lode is 2 feet wide, composed of quartz and a little arsenical pyrites. Since my last four samples have been tried with the following result:—No. 1 sample, 10 dwts.; No. 2 sample, 2 ounces 6 dwts.; No. 3 sample, 4 ounces 12 dwts. 18 grains; No. 4 sample (smalls), 16 dwts. 23 grains. The lode in the present end is looking very well. You will observe that we are opening up a good piece of ground for stoping. I want to communicate with the underlie shaft as quickly as possible, so that we can stope the back and bottom to keep the mill going. In trial shaft shaft on the western run of old workings the crosscut east to intersect the old workings has been advanced 7 feet 6 inches. We should get on much faster had it not been for the water. I have two 3 inch drawing lifts worked by coolies to keep the water. I expect to strike the old workings in 10 feet more driving.—Surface: We are busily engaged with the erection of stamps mill and other work. We anticipate starting the mill on or about the 7th of July.

MOUNT ZEEHAN (Tas.).—Manager reports for week ended 24th April:—Argent Section, main engine shaft, No. 6 lode 30 feet level south stope ore raised 63 tons 1 cwt. good seconds. 72 feet level south extended 7 feet, total 104 feet. Lode 6 feet wide carrying good seconds. Ore raised 20 tons 16 cwts. No. 1 rise has been completed. Ore raised 46 tons 3 cwts. good seconds. 72 feet level north stope ore raised 10 tons 8 cwts. medium seconds. Cross cut to south west branch extended 10 feet 9 inches, total 20 feet 9 inches, and cut through lode to footwall. Lode is from 1 to 4 feet wide, showing fairly good seconds. 132 feet level south extended 9 feet 6 inches, total 52 feet 6 inches. Lode 2 feet wide, showing splashes of galena. Ore raised 2 tons fair seconds. 132 feet level north stope, south west branch, ore raised 52 tons 13 cwts. good seconds. Lode 2 feet wide, good quality seconds. Main lode is 3 feet wide, showing splendid ore. No. 3 lode No. 2 shaft sunk 6 feet, total 49 feet 8 inches. Concentrator has been run 62 hours and milled 187 tons seconds for 38 tons 15 cwts. concentrates, containing about 28 tons 17 cwts. lead and 2854 ounces silver.

MYSORE.—R. Hancock, May 16: Mining operations for the fortnight ending May 14: 1460 cross cut west from Rowse's shaft has been driven 18 feet, making a total distance driven of 55 feet 6 inches. 1360 feet level north, south of the cross cut, has been driven 2 feet, making a total distance driven of 108 feet 4 inches; the lode is 2 feet wide, assaying 3 ounces. The rise in the back of this level has been put up 16 feet, making a total height of 116 feet; the lode is 2 feet wide, assaying 4 dwts. 13 grains. 1360 feet level north of winze has been driven 22 feet 6 inches, making a total distance driven of 121 feet 6 inches; the lode is 5 feet wide, assaying 9 dwts. 2 grains. The winze in the bottom of this level has been sunk 11 feet, making a total depth of 56 feet 6 inches; the lode is 3 feet wide, assaying 4 dwts. 13 grains. The rise in the back of 1260 north has been put up 14 feet, making a total height of 41 feet 6 inches; the lode is 5 feet wide, assaying 1 ounce 8 dwts. 11 grains. There are four stopes in the back of this level, the average width of the lode being 6 feet, giving an average assay of 19 dwts. 4 grains. There are three stopes in the back of 1260 feet level south, the average width of the lode being 2 feet, giving an average assay of 1 ounce 12 dwts. 10 grains. We have started to drive south on the fold in the back of this level, 10 feet south of rise, and have driven 8 feet 6 inches; lode is 1 foot wide, assaying 1 ounce 3 dwts. 6 grains. There are four stopes in the back of the 1160 feet level north, the average width of the lode being 2 feet, giving an average assay of 1 ounce 7 dwts. 11 grains. The rise in the back of the 1160 feet level south has been put up 6 feet, making a total height of 31 feet 6 inches. The lode is 2 feet wide, no assay made. Rising has been temporarily suspended, and the machine removed to drive on the fold in the back of the 1260 south. There are three stopes in the back of the 1060 feet level north, the average width of the lode being 1 foot 6 inches, giving an average assay of 1 ounce 3 dwts. 12 grains. We have two pares of men stripping down side in the bottom of this level, in which the lode is 2 feet 3 inches wide, assaying 14 dwts. 8 grains. We have a pare of men engaged stripping down side in the back of the 990 feet level north, in which the lode is 1 foot wide, assaying 5 dwts. 5 grains. The lode in the stope in the back of the 890 feet level north is 3 feet wide, assaying 13 dwts. 1 grain. We have a pare of men engaged stripping down side in the back of this level, in which the lode is 1 foot wide; no assay made. In the 780 feet level north the end has been driven 13 feet, making a total distance driven of 463 feet. We have met with some quartz 2 feet wide, but cannot say anything definite about it until we have driven a little further on it. The quartz assays 1 dwt. 7 grains. The lode in the stope in the back of this level is 3 feet wide, assaying 13 dwts. 1 grain. In the 620 feet level north of cross cut the end has been driven 2 feet 4 inches, making a total distance driven of 232 feet 10 inches. The lode is 6 inches wide assaying 3 dwts. 22 grains. There are two stopes in the back of this level the average width of the lode being 2 feet 6 inches giving an average assay of 14 dwts. 8 grains. The rise in the back of the 620 feet level south of crosscut has been put up 7 feet, making a total height of 137 feet, there is nothing here to report. The lode in the stope in the back of the 620 feet level south is 1 foot 6 inches wide assaying 3 dwts. 22 grains. The 466 feet level north, No. 1 crosscut, has been driven 13 feet 6 inches, making a total distance driven of 99 feet 3 inches. The rise in the back of the 400 feet level north has been put up 2 feet, making a total height of 122 feet 6 inches and holed to the winze sunk in the bottom of the 296 feet level. The drift north on the quartz met with in the Eastern side of the 236 feet level north has been driven 19 feet, making a total distance driven of 55 feet 6 inches. The lode is 2 feet 6 inches wide assaying 1 ounce 12 dwts. 16 grains. There are two stopes in this level the average width of the lode being 1 foot giving an average assay of 17 dwts. 14 grains. The rise in the back of this level to meet the Incline shaft has been put up 23 feet 6 inches, making a total height of 109 feet 6 inches. The Incline shaft has been sunk and timbered 25 feet, making a total depth of 118 feet 6 inches. There are two stopes in the back of Taylor's shaft, 400 feet level north, the average width of the lode being 2 feet giving an average assay of 15 dwts. 15 grains. Gilbert's shaft 650 feet level north has been driven 18 feet 6 inches, making a total distance driven of 319 feet 6 inches, there is nothing here yet to report. There are two stopes in the back of the 520 feet level, the average width of the lode being 2 feet, giving an average assay of 13 dwts. 1 grain. The lode in the stope in the back of the 520 feet level south is 1 foot 6 inches wide, assaying 9 dwts. 2 grains. There are two stopes in the back of the 360 feet level north, the average width of the lode being 2 feet 2 inches, giving an averge assay of 1 ounce 2 dwts. 4 grains. There are five stopes in the back of the 290 feet level north, the average width of the lode being 2 feet, giving an average assay of 18 dwts. 22 grains. The lode in the stope in the back of the 290 feet level south is 3 feet wide, assaying 5 dwts. 5 grains. Taking away arches of ground in the back of the 180 feet level south, lode 3 feet 6 inches wide, assaying 12 dwts. 1 grain. Tennant's shaft has been sunk 10 feet, making a total depth of 89 feet below the 520 feet level. There is nothing here to report. The rise in back of the 520 feet level north has been put up 9 feet 6 inches, making a total height of 60 feet. The lode is 2 feet wide, mixed, assaying 9 dwts. 2 grains. There are two stopes in the back of the 520 feet level north, the average width of the lode being 4 feet 7 inches, giving an average assay of 11 dwts. 12 grains. The winze in the bottom of the 360 feet level north, south of crosscut, has been sunk 6 feet, making a total depth of 28 feet. The lode is 1 foot 6 inches wide, assaying 6 dwts. 12 grains. The 290 feet level south, south of crosscut, has been driven 1 foot 6 inches, making a total distance driven of 70 feet. The lode is 7 inches wide, mixed, assaying 10 dwts. 10 grains.—Schaw's shaft: 450 feet level north crosscut east has been driven 2 feet, making a total distance of 19 feet 6 inches. The No. 3 rise in the back of this level has been put up 14 feet 3 inches, making a total height of 139 feet 3 inches. The lode is 1 foot 3 inches wide, assaying 8 dwts. 11 grains. The winze in the bottom of this level has been sunk 2 feet 6 inches, making a total depth of 74 feet 9 inches The lode is 1 foot 9 inches wide, assaying 1 ounce 8 dwts. 17 grains. The lode in the stope in the back of this level is 1 foot 3 inches wide, assaying 1 ounce 19 dwts. 4 grains. The rise in the back of the 450 feet level north, south of crosscut, has been put up 7 feet, making a total height of 21 feet 6 inches. The lode is 1 foot 6 inches wide, assaying 6 dwts 2 grains. The lode in the stope in the back of this level is 2 feet wide, assaying 10 dwts. 10 grains. The winze in the bottom of the 320 feet level north has been sunk 1 foot 6 inches, making a total depth of 150 feet 9 inches. The lode is 1 foot 6 inches wide, assaying 1 dwt. 23 grains. The rise in the back of the 320 feet level north of crosscut has been put up 6 feet 9 inches, making a total height of 63 feet. There is nothing here to report. The lode in the stope in the back of this level is 9 inches wide, assaying 19 dwts. 14 grains. The 320 feet level south of crosscut has been driven 3 feet, making a total distance driven of 162 feet 9 inches. The lode is 1 foot wide, mixed, assaying 4 dwts 13 grains. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 7 dwts. 19 grains. The 220 feet level north end has been driven 2 feet 6 inches, making a total distance driven of 252 feet 3 inches.—McTaggart's shaft: The 320 feet level north end has been driven 15 feet 9 inches, making a total distance driven of 200 feet. The lode is 1 foot wide, assaying 6 dwts. 12 grains.—Glen shaft: The 250 feet level north end has been driven 13 feet 9 inches, making a total distance driven of 1326 feet 3 inches. There is nothing here to report. The crosscut east in this level has been driven 2 feet 8 inches, making a total distance driven of 242 feet. We have intersected a small branch of quartz assaying 1 dwt. 23 grains. Ribblesdale's shaft has been sunk 14 feet 6 inches, making a total depth of 282 feet. We have a machine engaged at the

1060 crosscut west cutting out side preparatory to starting the rise.—Williams's shaft: The crosscut east from the shaft at the 173 feet level has been driven 4 feet, making a total distance driven of 36 feet. East prospect shaft, driving south 6 feet from the south end of No. 2 crosscut in the crosscut east has been driven 10 feet, making a total distance driven of 70 feet. At this point we put out a crosscut east which has been driven 24 feet, the latter 10 feet of which was through old workings. The footwall of the lode having been reached, we now intend to drive south on these old workings, the quartz from which essays 2 dwts. 14 grains. The health of the camp is good.

NINE REEFS.—Fortnightly report of Captain John Woolcock, mine agent, dated May 16: Vyvyan's shaft has been sunk to the required depth for the 460 feet level and is now 80 feet 6 inches below the 380 feet level. We have also made the necessary room at the bottom of the shaft for depositing the stuff from the levels driving north and south. The 460 feet level has been driven north of shaft 6 feet 9 inches. The lode formation is 4 feet wide, but unproductive. We find the ground is far worse for driving than it is for sinking, it being so jointed that we cannot bore deep holes, consequently there is a waste of time and additional expense in explosives. The 460 level south has been driven 8 feet 2 inches, and the character of the lode is the same as in the north end, which is very disappointing at this depth.—Bennett's shaft: The crosscut driving west at the 145 feet level north of this shaft has been further extended 10 feet 3 inches, making a total distance from the level of 240 feet 10 inches. The ground for the last 6 feet driving has been much dryer, and I put the men to drive north on the lode we intersected on the 27th ultimo to see if it will improve. At present it is 15 to 18 inches wide, of no value. If I find it does not improve in driving a short distance on its course I shall again resume the driving of the crosscut. The end is now 5 feet 6 inches north of crosscut. South shaft has been sunk 5 feet 5 inches, total depth from surface 121 feet 3 inches. Our progress has not been so good as I expected. The first week it was worked by hand labour when comparatively little was done. On Thursday we started the rock drills. To begin we had a little trouble. I was obliged to change the contractor, and hope now to do much better work. The ground in the bottom of the shaft is hard, and in the cleavage of the rock we get faces of nice looking quartz, which I look upon as a good sign. We have to take great care in the quantity of explosives used in our sinking holes, as our sets of timber are very near, and if broken would much retard the sinking, but every precaution will be taken to prevent this.—Prospecting: The No. 1 shaft near our southern boundary has been sunk 7 feet 6 inches, total depth from surface 52 feet 10 inches. The lode is from 15 inches to 18 inches wide, and shows a fine trace of gold in panwashing. In the past few days the timberman has been engaged timbering the upper part of the shaft, which has somewhat hindered the sinking, and the ground is also getter much harder. The No. 4 shaft has been sunk 4 feet 1 inch, total from surface 82 feet 1 inch. The lode continues about 9 inches wide, and at times we get a fairly good show of gold in the pan; the ground is hard, and the water is gradually increasing.—Surface: All our surface operations are going on satisfactorily. All the machinery, pitwork, &c., is is good order and working well.—Health: The health of the camp continues to be very good.

NUNDYDROOG.—May 16: Report of the work done for the first fortnight in May: Taylor's shaft sunk 9 feet, total depth 1057 feet. The lode is improving, being 1 foot wide and assaying ½ ounce per ton. 1000 south driven 22 feet, total length 220 feet. The lode in this end still continues small. 1000 north driven 21 feet, total length 448 feet. The lode is somewhat bigger than when last reported, being now 6 inches wide and assaying 6 dwts. 12 grains per ton. 920 north from No. 2 winze driven 36 feet 6 inches, total length 111 feet. There is a splendid lode here 4½ feet wide assaying 2 ounces per ton. 840 north No. 3 winze sunk 17 feet, total depth 58 feet 6 inches. The lode in this winze is a very fine one, it is 5 feet wide and assays 2 ounces 5 dwts. 12 grains per ton. 760 north No. 1 back stope ground stoped 6 fathoms in a lode 3 feet wide assaying 1 ounce 12 grains per ton. 760 north No. 2 back stope ground stoped 8½ fathoms in a lode 2½ feet wide assaying 17 dwts. 6 grains per ton. 680 north driven 22 feet, total length 209 feet. The end is very hard.—Main Shaft: We are poshing on the lengthening of this shaft between the 760 and 840 levels. Kennedy's shaft sunk 4 feet, total depth 532 feet. We also cut plats at the 520 levels, and owing to putting in angle-bob at the 300 level sinking has been delayed. We hope to make better speed here now. 520 crosscut west driven 17 feet, total length 58 feet. This is in very hard ground. 520 south driven 7 feet, total length 7 feet. The lode is looking well, it is 1½ foot and assays 16 dwts. 6 grains per ton. 520 north driven 25 feet, total length 37 feet. The lode is 3 feet wide and assays 19 dwts. 12 grains per ton. 440 south rise against north shaft risen 35 feet 6 inches, total 48 feet when we holed north shaft. 440 north driven 53 feet, total length 476 feet. The lode is still big, being 5 feet wide and its assay value is slightly lower, being now 18 dwts. 12 grains per ton. 370 north stope in bottom ground stoped 3½ fathoms in a fine lode 3 feet wide assaying 2 ounces 3 dwts. 6 grains per ton. 370 south stope in bottom ground stoped 6 fathoms in a lode 3 feet wide assaying 12 dwts. per ton. North shaft sunk 26 feet, total depth 403 feet when we holed the 440.—South rise: We are now squaring down shaft between 370 and 440 levels. The stopes, &c., working by hand labour, are as follows:—920 north, size of lode 6 inches, assay value 5 dwts. 920 south drive, size of lode 6 inches, assay value 4 dwts. 6 grains. 680 north winze, size of lode nil, assay value 3 dwts. 6 grains. 680 north rise and stope, size of lode 1 foot, assay value 6 dwts. 12 grains. 680 north No. 1 bottom stope, size of lode 1 foot 3 inches, assay value 10 dwts. 18 grains. 680 north No. 2 bottom stope, size of lode 1 foot 3 inches, assay value 12 dwts. 680 north No. 1 back stope, size of lode 2 feet 6 inches, assay value 10 dwts. 6 grains. 600 north No. 1 bottom stope, size of lode 1 foot, assay value 13 dwts. 600 north No. 2 bottom stope, size of stope 2 feet, assay value 10 dwts. 18 grains. 600 north No. 3 bottom stope, size of lode 9 inches, assay value 12 dwts. 600 north No. 4 bottom stope, size of lode 2 feet, assay value 9 dwts. 18 grains. 600 north No. 5 bottom stope, size of lode 2 feet, assay value 8 dwts. 18 grains. 600 north No. 6 bottom stope, size of lode 6 inches, assay value 7 dwts. 12 grains. 600 north intermediate, size of lode 1 foot, assay value 8 dwts. 18 grains. 600 north No. 1 back stope, size of lode 1 foot, assay value 13 dwts. 600 north No. 2 back stope, size of lode 1 foot 6 inches, assay value 15 dwts. 520 north No. 1 bottom stope, size of lode 1 foot 6 inches, assay value 7 dwts. 12 grains. 520 north No. 3 bottom stope, size of lode 1 foot, assay value 9 dwts. 18 grains. 520 north No. 3 bottom stope, size of lode 1 foot, assay value 10 dwts. 18 grains. 520 north No. 1 back stope, size of lode 9 inches, assay value 13 dwts. 520 north No. 2 back stope, size of lode 1 foot, assay value 18 dwts. 12 grains. 520 north No. 3 back stope, size of lode 9 inches, assay value 14 dwts. 370 north No. 1 back stope, size of lode 1 foot, assay value 15 dwts.—Kennedy's: 95 north No. 1 bottom stope, size of lode 3 feet, assay value 6 dwts. 12 grains. 95 north No. 2 bottom stope, size of lode 1 foot, assay value 8 dwts. 160 south No. 1 back stope, size of lode 9 inches assay value 13 dwts. 160 north intermediate, size of lode 6 inches, assay value 3 dwts. 6 grains. 160 north intermediate No. 1 winze, size of lode 5 inches, assay value 4 dwts. 6 grains. 300 south No. 1 back stope, size of lode 6 inches, assay value 7 dwts. 12 grains. 300 south No. 2 back stope, size of lode 9 inches, assay value 1 ounce 12 dwts. 12 grains. 300 north No. 1 rise and stope, size of lode 4 feet, assay value 11 dwts. 300 north No. 2 back stope, size of lode 9 inches, assay value 2 ounces 12 dwts. 370 north No. 1 back stope, size of lode 1 foot, assay value 1 ounce. 440 south drive, size of lode 6 inches, assay value trace.—Mills: Both mills and tailings machinery are running well.—Health: The general health of the camp is good.—Old mill samples: Rough quartz through stonebreaker, 18 dwts. 12 grains; smalls, 16 dwts. 6 grains; tailings, 5 dwts.—New mill samples: Rough quartz through stonebreaker, 10 dwts. 18 grains; smalls, 10 dwts.; tailings, 4 dwts.

ROBINSON GOLD.—The directors have issued the general manager's summary of operations of the company for April, together with statement of expenditure and revenue, as follows:—Mine: Quartz mined, 8890 tons.—Permanent works: Main incline shaft west sunk 41 feet; main incline shaft east sunk 35 feet—76 feet.—Development: Drives, 353 feet; raises, 338 feet; cross cuts, 156 feet—847 feet; total, 923 feet.—Main incline shaft west: Sinking below the seventh level, 41 feet.—Fifth level: Driving east on south reef, 37 feet; raises, 186 feet.—Sixth level: Driving east and west on main reef, 27 feet; driving east and west on south reef, 60 feet; raises, 30 feet; cross cuts, 18 feet.—Seventh level: Driving east on main reef, 4 feet; raises, 60 feet; cross cuts, 69 feet.—Main incline shaft east: Sinking below the seventh level 35 feet. Sixth level driving east and west on main reef, 50 feet; driving east and west on south reef, 112 feet; raises, 62 feet; crosscuts 24 feet. Seventh level driving east and west on main reef, 53 feet; crosscuts, 45 feet. Total, 923 feet. Average width and assay value of south reef developed during month: Width, 6 inches; assay value, 5 ounces 15 grains.—Mill: Stamps at work, 70; net running time, 29 days; tons crushed, 8890; tons per stamp per diem, 4·4: gold won from above, 10,017 ounces 19 dwts.—Chlorination and cyanide works: Gold won from own concentrates (by chlorination), 1132 ounces; bullion from tailings (cyanide process), 1222 ounces 19 dwts. From own ore, 12,372 ounces 18 dwts.; gold from concentrates purchased (by chlorination), 2310 ounces 17 dwts.; total, 14,683 ounces 15 dwts.

MYSORE WEST AND MYSORE-WYNAAD CONSOLIDATED.—The mining manager in India reports by mail under date May 16, as follows:—North shaft: 350 feet level, No. 2 south drive has been driven 23 feet, total distance 26 feet. The ground is fairly easy and open. We have met a little water, but the formation has produced no quartz of value, although the line of country agrees with the lode in south shaft and Coromandel shaft. I propose crosscutting east from the end of the 350 feet level north as soon as possible. South shaft has been sunk 2 feet in one week, total depth 400 feet 6 inches. After putting in a sink for water at the south end of the shaft a crosscut was commenced, which struck a heavy body of water. In a very short time there were 8 feet of water in the shaft, the pumps going as fast as possible. On Sunday morning the top lift gave out, and we did not get the water under until 11 p.m. on Monday. 400 feet level crosscut west has been extended 5 feet, total 5 feet. The ground is rather open and carries crossheads. I am in hopes of reaching the lode before my next letter.—354 feet level: North drive has been extended 17 feet 9 inches. Total length, 185 feet 9 inches. At present there is no quartz in the face, the hanging wall remains good, and I am hopeful of quartz coming in again on this side.—354 feet level: South drive crosscut west has been driven 5 feet 6 inches in one week. Total distance, 37 feet. No more quartz appearing at this end the work has been stopped.—Stopes in the 354 feet level have been extended 16 feet. Total length, 142 feet. The lode is now divided, carrying quartz on both walls, the total width being a little over 3 feet, and averaging ½ ounce of gold per ton.—Quartz at surface: We have 65 tons of stone for crushing at surface, which contains about 50 per cent. of quartz. The stone for crushing will, as far as possible, be hand dressed before going to the battery.—General: I am very hopeful of soon cutting the lode in the 400 feet crosscut west, and expect, from indications, it will prove stronger and more settled than in the upper levels.—Health: Several men have been down with fever, but I am glad to say there is an improvement in the health of the camp.

QUEEN'S CROSS REEF.—Copy of mining manager's report for fortnight ending April 17: Since last report the contractors, Davis and party, have sunk the vertical shaft 11 feet and timbered up 79 feet, making the total vertical depth 784 feet, and 30 feet below the timber. The tributers, Barrett and party, have about 50 tons of stone broken. The other tributers are doing fairly well. Everything in connection with the mine is in fair working order.

SOUTH-EAST MYSORE.—Fortnightly report of Captain M. Scantlebury, mine agent, dated May 16: Beresford's shaft has been sunk 1 foot 6 inches, which makes a depth of 106 feet 3 inches on the course of the lode and 204 feet from surface. The lode is 4 feet wide in the bottom, assaying 1 ounce 6 dwts. of gold to the ton. On the 10th instant we commenced to drive with rock drills at the 200 feet level. The 200 feet level north has been advanced 6 feet. The lode is 4 feet wide, assaying 6 dwts. 12 grains of gold to the ton. The 200 feet level south is extended 5 feet. The lode is 4 feet wide. There is 2 feet of solid quartz against the hanging wall assaying 5 ounces 7 dwts. 18 grains. The lode is intermixed on the foot part with country rock and iron pyrites assaying 3 dwts. 6 grains of gold to the ton. I hope next week to start a level south at the point of intersection of the lode with the vertical shaft.—Pigott's shaft: The crosscut east at the 180 feet level to intersect the lode has been advanced 6 feet. The rock is very hard and the progress slow with hand labour. The lode is going down very right, otherwise we should have cut it before this, but assuming it has taken the same dip as what the lode has in the Mysore Reefs property when it came in contact with the hard rock, we have about 12 feet more to drive to intersect it.—Surface: The air compressor is at work, and in a few days we shall commence to take down the stamps and engine at South-East Mysore.

VICTORY (Charters Towers).—Copy of mining manager's report for fortnight ending April 21: No. 2 Shaft: Eastern underlie sunk 9 feet, reef in bottom 2 feet medium quality. Progress has been slow on account of heavy ground. No. 6 level driven 15 feet. Reef has varied from 1 to 4 feet, 18 inches fair stone showing in present face. No. 5 level extended 12 feet, have 2 feet fair quality stone in the end. A winze has been sunk 30 feet in this drive, 80 feet from shaft, carrying 2 feet of reef in bottom, quality good. Stoping over this drive on 6 to 30 inches medium stone. Driven cross drive in No. 4 east 13 feet, no change. Have started a cross drive from No. 3 west, 340 feet from shaft on footwall side, now in 4 feet in broken country. No. 2 west level driven 15 feet, country getting harder. Sunk winze from No. 1 west 15 feet at a distance of 100 feet from cross drive. No. 1 A west level driven 6 feet. Raised from shaft 360 tons, No. 1 shaft 34 tons, total 394 tons.

VICTORIA AND QUEEN GOLD.—Copy of manager's report for fortnight ending April 18th: Jevons and party have driven the No. 2 eastern drive a further distance of 26 feet, making total from shaft 50 feet. The reef is pinched at present to about 5 inches of good mineral stone. No. 2 western drive has been driven a further distance of 16 feet, making total from shaft 38 feet. The reef shows a little more mineral. We have also laid the plat timber and cut the kepple pits. I have stopped the men in the underhand stopes and put them to stope in the back of the No. 2 eastern drive. The reef varies from 6 to 10 inches. Wellington and party have driven the crosscut a further distance of 32 feet, making total from drive 100 feet, which leaves them 9 feet more to complete their contract. About 97 feet from the drive we cut a reef 6 inches thick on the eastern side. We expect to have steam up on the new boiler tomorrow. We have hauled 25 tons of stone during the fortnight, and have carted 60 tons to the mill, and there now remains in the paddock about 10 tons. Everything connected with the mine is in fair working order.

BRILLIANT BLOCK.—Mine manager's report for fortnight ending April 4: Underlie shaft deepened 12 feet by contract, total depth below No. 5 plat. Reef in bottom about 4 feet thick medium quality. No. 5 level west extended 23 feet by contract, total from shaft 117 feet. No stone in face at present. Reef in the two stopes over this level varies from 1 to 4 feet thick, fair quality. No. 5 level east extended 24 feet by contract, total from shaft 110 feet. Reef in face is about 2 feet thick of medium quality. In the two stopes over this level, reef varies from 6 inches to 4 feet thick of fair quality. Stoping is being carried on over the No. 4 level west in three stopes, on from 1 to 3 feet of stone of low quality. No. 1 winze from No. 4 level east deepened 17 feet by contract, total depth from level 37 feet, carrying reef 3 feet 6 inches thick, good quality. Stoping is being carried on over the level on the footwall, on reef varying from 6 inches to 2 feet fair quality. We are also stoping on the hanging wall portion on 1 foot of stone of good quality. We are stoping in one stope over the No. 3 level east on 18 inches of stone. We are stoping over the No. 1 level east, and near the Brilliant P.C. boundary on from 1 to 2 feet of stone of low quality. Stone raised 650 tons. Stone crushed 716 tons for 1069 ounces 3 dwts. of gold. Water hauled about 200,000 gallons for the fortnight.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Sherlock Gold Mines (Limited).—Registered May 16. Capital £60,000, in £1 shares. Object, to purchase, take on lease, or otherwise acquire, explore, work, exercise, develop, and turn to account any gold, silver, copper or other mines, metalliferous land, mining rights, and diggers' claims, either in California, the U.S.A., or elsewhere, and in particular the land, mines, bed of ore and mining rights and claims known as the Sherlock Gold Mines, comprising the W. Y. O. D., the Omaha, the North Star, and the Wisconsin Mines, with mill site and other land situate in the Whittock mining district in the county of Mariposa, California. There shall not be less than three nor more than five directors. The first are Charles H. Tindal, W. P. Smith, W. Chatwin, F. Spencer, and David L. Baumgarten (managing director.) Qualification not stated. Remuneration £150 each per annum. Chairman £100 extra per annum, and £50 each per annum when 20 per cent. is paid, and a like sum for every additional 5 per cent. per annum.

Lewis Mining Investment Trust (Limited).—Registered 17th May. Capital £5000, in £5 shares. Objects: To invest the monies of the company in stocks and shares, but so that not more than one-fifth of the subscribed capital be invested at one time in the shares of one company.

Argentine Concessions (Limited).—Registered 18th May. Capital £25,000, in 2s. shares. Objects: To enter into an agreement to be made between the West Argentine (Limited) of the first part, the San Luis Mining Syndicate (Limited) of the second part, and this company of the third part, for acquiring the property of the first-named company in the Argentine Republic, and generally to carry on the business of a mining company.

Gold Fields Syndicate and Mining Agency (Limited).—Registered 18th May. Capital £30,000, in £1 shares. Objects: To prospect, explore, open, and work claims and mines in South Africa and elsewhere.

North Swazieland Syndicate (Limited).—Registered May 18. Capital £50,000, in £1 shares. Objects: To purchase from William Halford all his right, title, and interest, in the mineral properties, rights, lands, and other assets of the Wyldedale Gold Exploration and Developing Company (Limited), purchased by him from the liquidator; to work, explore, develop, and maintain the lands, mines, minerals, and other properties of the company; and to carry on the business of a mining, milling, smelting, trading, and agricultural company. There shall not be less than three nor more than five directors. The first are George Freeman, Charles F. Brown, and William Halford. Qualification, 100 shares. Remuneration as fixed by the company in general meeting.

Westralia Prospecting Syndicate (Limited).—Registered 18th May. Capital £2500, in £1 shares. Objects: To carry on the business of mining and exploring in Australia and elsewhere.

Antimony Leasing Syndicate (Limited).—Registered May 19. Capital, £10,000, in £1 shares. Objects: To carry on the business of miners, quarrymen, quarry proprietors, timber merchants, smelters, ore and metal refiners, engineers, &c., in France and elsewhere.

Golconda Gold Mines (Limited).—Registered 19th May. Capital £75,000, in £1 shares. Objects: To adopt and carry into effect an agreement dated 26th and 27th April, 1894, between John S. Cox, James Duff, W. D. Cairney (the committee of management of the Coolgardie (Glasgow) Gold Fields Syndicate); Douglas Cairney (secretary of the said syndicate), and Hugh Walker for himself, and as attorney for Thos. W. Browne of the one part, and John Nelson (for the company), of the other part, for the acquisition by the company of the leases of the "Golconda" and the "Golconda" Extended Gold Mining Claims in the Murchison Gold Fields of Western Australia, and to develop, work, turn to account, and deal with the same. There shall not be less than two nor more than seven directors. The first are to be appointed by the signatories to the Memorandum of Association. Qualification, £100. Remuneration, £125 each per annum, £50 extra for the Chairman and a percentage of the profits.

Joe's Reefs United (Sheba) Limited.—Registered 19th May. Capital £60,000 in £1 shares. Objects: To enter into and carry into effect an agreement already prepared and expressed to be made between the Joe's Luck and Bon Accord (Sheba) Gold Mining Company (Limited), in liquidation, and Frederick W. Selleck, its liquidator, of the one part, and the company of the other part, to acquire any interest in certain claims known as Thomas Claim, situate in the De Kaap Gold Fields, South African Republic, and to carry on the business of miners, millers, smelters, suppliers of water, &c. There shall not be less than three nor more than six directors. The first are to be nominated by the signatories to the Memorandum of Association. Qualification £500. Remuneration £800 per annum, divisible.

Matabeleland Adventurers (Limited).—Registered by Edwin Andrew White, of 27, Clement's Lane, E.C., with a capital of £11,000, divided into 10,000 ordinary shares of £1 each, and 1000 deferred shares of £1 each. Objects: Prospecting, exploring, acquiring, developing and otherwise dealing with mining and other properties. Table A mainly applies.

Mysore West Gold Company (Limited).—Registered May 21. Capital £150,000, in £1 shares. Objects: To acquire and turn to account the lands, buildings, mines, concessions and assets of the Mysore West Gold Company (Limited), in voluntary liquidation, and to adopt an agreement to be made between the said old company and Robert Walker and Leonard J. Woodman, its liquidators, of the one part and the company of the other part, and an agreement dated May 3, 1894, between the said old company of the first part, George Herring (acting on behalf of the debenture holders of the old company) of the second part, and James L. Wanklyn (for this company) of the third part. There shall not be less than three nor more than five directors. The first are Robert Walker, J. Shaw Kennedy, and James L. Wanklyn. Qualification 200 shares. Remuneration, £200 per annum and a percentage of the profits divided between them.

Mysore-Wynaad Consolidated Gold Mining Company (Limited).—Registered by Sealon Taylor, 5, Gray's Inn Square, W.C. Capital £150,000 in £1 shares. Objects: To acquire from the Mysore-Wynaad Consolidated Gold Mining Company (Limited), in voluntary liquidation, and the liquidators thereof, the lands, buildings, mines, concessions, credits and assets of that company; to carry on the business of gold mining generally in Mysore and elsewhere in India. There shall not be less than three nor more than five directors. The first are Robert Walker, J. Shaw Kennedy, and James L. Wanklyn. Qualification £200. Remuneration £200 per annum and a percentage of the profits, divisible.

Gold Reefs (Booysen) Development Company (Limited).—Registered May 22. Capital £150,000 in £1 shares. Objects: To purchase or otherwise acquire all the rights of the Booysen Land and Mining Company (Limited), as owners of the Booysen Estate or Farm, situate near Johannesburg, in the Republic of South Africa; to work or cause to be worked the mines of precious metals or precious stones upon such estate or farm, subject to the conditions of the gold laws for the time being of the said Republic; and to carry on the business of farmers, tree growers and planters, colliery proprietors, builders, stone, lime, timber and other building material merchants, engineers, contractors, &c. There shall not be less than two nor more than six directors. The first are to be appointed by the signatories to the Memorandum of Association. Qualification £100. Remuneration £100 each per annum, with £50 extra for the Chairman.

London Mining Investment Corporation (Limited).—Registered May 22, by H. C. Wiele, 85, Farringdon Street, E.C. Capital £1000 in £1 shares. Objects: To buy, sell, and deal in mining shares, interests and concessions, and to carry on the business of company promoting.

Rajpur Estate and Mining Company (Limited).—Registered May 22, by Waterlow Brothers and Layton (Limited), Birchin Lane, E.C., with a capital of £5000 in £10 shares. Object: To acquire and carry on the business of a shellac and ginger planter and merchant, now carried on by F. F. Mackenzie at Cachar, Eastern Bengal, India. The first directors—to be not less than two nor more than seven—are William B. Avery and W. J. B. Mackenzie. Qualification 20 shares. Remuneration to be fixed by the company.

West Australian Gold Concessions (Limited).—Registered 24th May. Capital £25,000, in £1 shares. Objects, to search for, prospect, examine, and explore any territories and places in Western Australia and elsewhere, and to employ and to equip expeditions, explorers, experts, and other agents.

Oregon Gold Mining Syndicate (Limited).—Registered by Chester and Co., 36, Bedford Row, W.C., with a capital of £1500 in £1 shares. Object, to carry into effect an agreement with W. P. Smith, and to explore mines and ground supposed to contain minerals, precious stones, &c., and to turn to account the same in such manner as the company shall deem expedient. Most of the regulations contained in Table A apply.

West Australian Gold Concessions (Limited).—Registered by Ashurst, Morris, Crisp, and Co., 17, Throgmorton-avenue, E.C., with a capital of £25,000 in £1 shares: Object: To enter into an agreement with E. D. Oppert and Co., and to carry on the business of a land exploration company in Western Australia or elsewhere. The first directors—to be not less than two nor more than five—are to be nominated by the signatories to the Memorandum of Association. Qualification, £200. Remuneration, £100 each per annum and a percentage of the profits.

White's Syndicate (Limited).—Registered by Ashurst, Morris, Crisp and Co., 17, Throgmorton Avenue, E.C., with a capital of £15,000 in £1 shares. Object: To enter into an agreement with the Hon. C. J. White; to locate, peg off, or otherwise acquire any mining claims, mines, mining rights, &c. in Africa, and to develop and turn to account the same. The first directors—to be not less than three nor more than five—are to be elected by the signatories to the Memorandum of Association. Qualification, 30 shares. Remuneration to be fixed by the company.

Halifax (Nova Scotia) Mining Syndicate (Limited).—Registered by A. Richard, 15, George Street, Mansion House, E.C., with a capital of £1200 in £100 shares. Object, to acquire, by purchase or otherwise, and work, mining rights and concessions, metalliferous and other lands and coal properties in Nova Scotia. Registered without Articles of Association.

Peerless Silver Metal (Pioneer) Syndicate (Limited).—Registered by Hays, Schmettau and Ancrum, 31, Abchurch Lane, E.C., with a capital of £100,500 in 100,500 £1 shares, 500 of which are founders. Object, to acquire the benefits of an agreement, made May 5, 1894, between the Craig Silver Company, of the United States of America, by their power of attorney (D. E. Soule, president) of the one part, and this company (by Daniel Boyd) of the other part, and to carry on the businesses of manufacturers of and dealers in metals, machinery, and mechanical appliances of every description, metal founders, mine owners, smelters, engineers, bankers, traders, contractors, &c., in all or any of their respective branches. There shall not be less than two nor more than seven directors; the first are to be elected by the signatories to the Memorandum of Association. Qualification, one founders' and 100 ordinary shares. Remuneration, £1000 per annum, divisible.

Nova Scotia Gold Mines (Limited).—Registered by A. J. Wulff, St. Helen's Place, E.C., with a capital of £35,000 in 10s. shares. Object, to enter into an agreement with the Nova Scotia Gold Mines, Limited (the old company), and its liquidator for the acquisition of certain mines, particulars of which do not transpire, and to develop and turn to account the same. The first directors—to be not less than three nor more than seven—are to be elected by the signatories to the Memorandum of Association, Qualification, £100. Remuneration to be fixed by the company.

Great Western Slate Quarries (Limited).—Registered by W. U rich, 23, Martin's Lane, Cannon Street, E.C., with a capital of £20,000 in £5 shares. Object, to acquire the estate, right, title, and interest of James Howell and others in slate rocks, stone quarries, &c., under certain lands at Modbury, Devon, and to work and turn to account the same. Most of the regulations contained in table A apply.

The Kootenay and Columbia Prospecting and Mining Company (Limited).—Registered 10th April, at Victoria, British Columbia, under the "Companies' Act," Part IV., "Registration of Foreign Companies," and the "Companies' Act Amendment Act, 1889." The head office of the company is situated at the City of Ottawa, in the Province of Ontario, Canada. Objects: To carry on a general mining business; to buy and sell and otherwise deal in mines, mining lands, and minerals; to prospect and explore for quarry, develop, work, extract, and mine throughout the Province of the Dominion of Canada, gold, silver, copper, precious metals, baser metals, coal, marble, minerals, and ores of every kind; to crush, smelt, reduce, treat and manufacture, forward, ship, and sell the same, and for such purpose to construct, establish, and operate works, wharves, and warehouses, and acquire and own real estate, and for such purpose to construct, establish and operate works, wharves, and warehouses, and purchase, lease, acquire, hold, own, sell, mortgage, or dispose in any way all such real or personal property, mining locations, limits or rights, as may be requisite for the carrying on of the business of the company; to acquire, construct, own, or lease and operate such tramways, telegraph and telephone lines, roads, vessels, and works as may be necessary for the carrying on of the business of the company, and generally to do all such things as are incidental or conducive to the attainment of all or any of the objects of the company throughout the dominion of Canada. Capital, $40,000 in 400 shares of $100 each.

FINANCE POPULARISED.—To the novice in financial matters the "Popular Handbook of Finance," recently published by Messrs. Saxon and Co., will come as a useful assistance. With so many similar works out of the press, it rests with the author, Mr. A. Baines, to explain and justify his action in adding one to the number. This he does by claiming for the little volume that it "embodies in handy form more information of an elementary nature than any other book published." Allowing something for the pride of authorship, the writer's claims may in the main be conceded. The work is neatly got up, and the information it contains is at once comprehensive, judiciously selected, and couched in admirably clear language. All the complicated machinery of stock and share dealing and company promotion is simplified and laid bare in a manner that argues for the author not only a long experience in this department of City work, but in addition the faculty of putting its results into simple and lucid language. The interests of investor and promoter are not always identical, and the author, in his dual capacity of adviser to both, has had to look at matters from two essentially different points of view. His delicate task has been honourably fulfilled, and it is safe to assert that were his advice followed in all quarters of the financial world, there would be fewer strains put upon the public confidence, and a healthier tone prevalent in investing circles. Considered in relation to the size of the volume, the multiplicity of its subject-matters is extraordinary. It is difficult to remember anything which has escaped the attention of Mr. Baines, while there are many things put in which could have been left out without endangering the reputation of the volume. The handbook may be dismissed with a hearty recommendation to all those for whom it is intended.

COLLIERY MANAGERS' CONFERENCE IN EDINBURGH.—A general meeting of colliery managers, under the auspices of the National Association of Colliery Managers, was held in Darling's Hotel, Edinburgh, on Saturday afternoon.—Mr. William Hoole Chambers, Tankersley Colliery, near Barnsley, president of the association, presided.—The Chairman said their wish in England was to give the very best head they could to any suggestions which the Scottish branch might make, and, at the same time, to have an eye on the successful carrying on of the association. The need for such an organisation was to be seen in past legislation affecting colliery managers. The Mining Act of 1887 contained a clause which, contrary to all principles of jurisprudence and of equity, deemed a man guilty till he had proved his innocence. That was a clause which in any new legislation affecting the mining interest the association would endeavour to have repealed. They had that day as a council decided to very strongly oppose to the utmost of their power the provisions affecting them which were at present before Parliament in reference to the Eight Hours Bill. He could assure the association that the Parliamentary Committee and Council of the association were thoroughly in earnest in endeavouring to have that measure put into such a shape as that it should not interfere with the interests of the colliery managers of this country. He noticed that a feeling existed in certain quarters that the interests of the association clashed with those of the mining institutes of the country. They had an experience of that feeling in the district from which he came, and it had had a very considerable effect against the National Association in the past; but he was happy to say that they had been enabled to meet together, and to a very great extent to eradicate the impression that this association had any antagonistic spirit to mining institutes. (Applause.) There was a sphere for both associations to occupy with considerable advantage to each. The mining institutes naturally turned their attention to scientific purposes, while the object of this association was to protect the interest of the colliery managers.—Mr. William Roy, Lauchope Colliery, Holytown, expressed his regret that there was so small a representation of the members of the Scotch branch. One of the grievances which the Scotch Association had was that in the event of a manager being taken up by the Inspector, by the time they went through the form of applying to headquarters and received a reply, they felt the action might be lost. He was pleased the president had dealt with the matter. It was right they should have a fair and square understanding upon it.—Mr. Adam Spiers, Kirkliston, said the present position of affairs no doubt had left an impression on the Scotch managers' minds that the association had more in its articles than it was able to accomplish—in reference, for example, to defence. The impression had, no doubt, been gaining ground that it was scarcely worth while to apply to the association for any help.—Mr. Wm. Archibald, Westburn Colliery, Cambuslang, suggested the formation of two branches in Scotland, one for the East, and one for the West of Scotland. (Hear, hear.)—Mr. John Anderson, Motherwell, said he did not doubt that in Scotland many of the managers realised the benefits that would accrue from an efficient association, but it was the practical inefficiency of it that had not made it felt amongst Scotch members. He thought the Scotch branch should have powers to act upon any case arising in Scotland.—Mr. T. O. Robson, Gateshead-on-Tyne, stated that the council that morning had agreed that each branch might, when cases were brought under their notice, instruct a law agent to take action. That step, he thought, should do much to make the association a success in Scotland.—Mr. J. S. Sparkes, Bristol, said one of the main objects of the association was not to prevent a conviction, but to quash it after it had been obtained.—Mr. J. Malcolm, Haywood, said he had a feeling that the matter was almost hopeless so far as Scotland was concerned. So long as managers were defended by their employers, as they generally were in Scotland, there was really very little room for an association whose object was to defend them. The proceedings of the general meeting then terminated. A meeting of the Scottish branch afterwards was held, at which, among other things, Mr. Roy was deputed to ask the Council to consent to a reduction of the annual subscription. At the meeting of the General Council held subsequently, the President said he could hold out no hope that that would be done. It was practically impossible to carry on the work of the association unless the existing contribution was maintained. The Council of the Association held a number of private meetings in Edinburgh on Thursday, Friday, and Saturday, at which, among other things, proposed legislation affecting colliery managers was considered. A resolution was adopted appointing a committee to draw up a memorial to the Home Secretary against proposals in the Eight Hours Bill that the penalty should apply to the manager, and against the "bank to bank" clause. The Council also re-affirmed their previous resolution that no inspectors should be appointed who were of a lower grade than the people they were to inspect.

SOUTH YORKSHIRE COAL.—The North-Eastern Railway Company have accepted tenders for supplies of Barnsley hard coal for the ensuing six months at 8s. 9d. per ton of 20 cwts. The price is a favourable one, and likely to prevent any difficulty on the wages question so far as South Yorkshire is concerned. The contract price of June last was 7s. 9d. for 20 cwts., as against 8s. 6d. to 9s. for 20 cwts. in the previous January. The present price is the same as was paid by the North-Eastern Company in 1892. The company uses 600,000 to 700,000 tons of coal per annum. The trade is in a stronger position than last year, as the average export price in April was 10s. 9d. per ton, as compared with 9s. 4½d. per ton in April, 1893, and on four completed months of this year the average price was 11s. 2½d. per ton, as compared with 9s. 7¾d. per ton in the same period of 1893.

WANTED.

*** Prepaid Advertisements are inserted in this column at the rate of 8d. per line with a minimum charge of 4s.

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Address, "MEXICO," care of A. W. WELLS, 1, Queen Victoria Street, London, E.C.

ENGINEER (Metallurgical) is OPEN to ENGAGEMENT. Has been 10 years Manager of Works. Good testimonials.

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THE CRAMLINGTON COAL COMPANY (LIMITED), REQUIRE a MINING ENGINEER to take the entire charge of their Colliery in every department above and below ground.

Application by letter only to the CRAMLINGTON COAL COMPANY (Limited), Lombard Street, Newcastle-on-Tyne.

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SHIPPING.

UNION LINE.

FOR SOUTH AFRICAN GOLD FIELDS.—WEEKLY SERVICE.—CAPE OF GOOD HOPE, NATAL, and EAST AFRICAN ROYAL MAIL STEAMERS.—The UNION STEAMSHIP COMPANY'S ROYAL MAIL and INTERMEDIATE STEAMERS will Sail as follows for the SOUTH and EAST AFRICAN PORTS, to ZANZIBAR, calling at LISBON, MADEIRA, and TENERIFE.

Steamers.	Antwerp.	Rotterdam.	Hamburg.	Southampton.
†§Arab..	—	June 4	June 9	June 16
†§Athenian	—	—	—	June 23
‡Anglian.....	June 18	—	June 23	June 30
‡Moor	—	—	—	July 7

† Calling at Madeira. ‡ Via Lisbon and Tenerife. § To East Africa.

Free railway tickets from London and Plymouth to Southampton.

Cheap Tickets are issued for Passengers' Friends.

All Steamers now leave Southampton on Saturday.

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RETURN TICKETS ISSUED.

Apply to the UNION STEAMSHIP COMPANY (Limited), Canute Road, Southampton; 14, Cockspur Street, London, S.W.; and South African House, 94 to 96, Bishopsgate Street Within, London, E.C.

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WEEKLY SERVICE FOR THE GOLD FIELDS OF SOUTH AFRICA.—The CASTLE COMPANY'S STEAMERS leave LONDON (East India Dock Basin, Blackwall) every FRIDAY, and sail from SOUTHAMPTON every SATURDAY.

Steamers.	London.	Southampton.
Grantully Castle (via Madeira)	June 15	June 16
*Pembroke Castle (via Grand Canary and St. Helena	June 22	June 23
Dunottar Castle (via Madeira)... ...	June 29	June 30
Garth Castle (via Grand Canary).....	July 6	July 7

* Takes Cargo also for Madagascar and Mauritius.

Return tickets to all Ports.

Free Tickets by Rail from Waterloo to Southampton.

Apply to DONALD CURRIE and Co., 3, Fenchurch Street, London, E.C.

ABRIDGED PROSPECTUS.

CONVERSION AND REDEMPTION

OF THE

IMPERIAL TURKISH 5 PER CENT. LOAN OF 1854,

AND

4¼ PER CENT. LOAN OF 1871.

ISSUE OF £8,212,340 3½ PER CENT. BONDS,

Secured by the Egyptian Tribute.

His Highness the Khedive of Egypt has, by an engagement entered into by him, and published on the 2nd June, 1894, in the *Journal Officiel* of the Egyptian Government, undertaken to pay to the Bank of England the annual sum of £329,249 6s. 1d. for the service of this Loan. This engagement will continue until the whole of the Loan has been redeemed, and the annuity is, under the instructions of His Imperial Majesty The Sultan of Turkey, secured by the Egyptian Tribute.

HIS IMPERIAL MAJESTY THE SULTAN OF TURKEY having, by an Iradé, dated the 14th May, 1894, authorised the above Loan, His Excellency Nazif Pacha, Minister of Finance of the Ottoman Empire, has, on behalf of the Imperial Ottoman Government, contracted with Messrs. N. M. Rothschild and Sons, of London, Messrs. de Rothschild Brothers, of Paris, and the Imperial Ottoman Bank, to carry out the above operations.

Subscriptions may be made in Bonds, which have not been previously drawn, of the Turkish 5 per Cent. Loan of 1854, or of the 4¼ per Cent. Loan of 1871.

Applications for the New Bonds *in exchange for Bonds of the above mentioned Loans which have not been previously drawn*, will be received any day (except Saturday) UNTIL THURSDAY, the 14th JUNE, 1894, INCLUSIVE, on the following conditions:—

Subscribers in Bonds will receive allotment in full.

5 PER CENT. LOAN OF 1854: For every £100 of the Five per Cent. Bond subscribers will be entitled to receive 3½ per Cent. Scrip of equal nominal value, and in Cash, a bonus of £6, as well as £1 6s. 4d. (less income tax), being interest at 5 per cent. per annum from the 10th April to the 15th July, 1894, the date from which Interest will commence on the new Stock.

4¼ PER CENT. LOAN OF 1871:—For every £100 of the 4¼ per Cent. Bonds, subscribers will be entitled to receive 3½ per Cent. Scrip of equal nominal value, and in Cash, a bonus of £6, as well as £1 2s. 4d. (less Income Tax), being Interest at 4¼ per Cent. per annum from the 10th April to the 15th July, 1894, the date from which Interest will commence on the new Stock.

For fractional parts of £100, proportionate allotments and cash payment will be made, but in cases where the total of the Bonds presented for conversion is not a multiple of £20, allotment will be made as nearly as the smallest denomination of Bond will permit, and the difference adjusted by a Cash Payment to the Subscriber.

Cheques for the above-mentioned Bonus and Interest will be delivered with the Scrip, which will be issued as soon as possible after allotment.

Application must be made on the form annexed to the prospectus, and accompanied by a deposit of £5 per cent. in money, or an approximate amount in convertible Bonds, unless Subscribers prefer to deposit all their Bonds when making application; the whole of the Bonds furnished with all Coupons subsequent to the 10th April, 1894, must be delivered as soon as the Scrip is ready to be given in exchange, and failure to deliver them in due course will render the deposit on application liable to forfeiture.

Bonds presented for conversion must be listed on forms which can be obtained on application.

All Bonds of the 5 per cent. Loan of 1854 and of the 4¼ per cent. Loan of 1871, not presented for Conversion, will be called for repayment at par, with accrued Interest, on a date to be subsequently announced, and will cease to bear Interest from that date.

The Scrip, after payment of the last instalment, will be exchanged for the Bonds as soon as they are ready for delivery.

The new 3½ per Cent. Bonds, as regards both Principal and Interest, will be free from all Turkish taxes, and will be issued to bearer in sums of £20, £100, £500, and £1000, with Coupons payable half-yearly on the 15th April and 15th October, in London in pounds sterling, and in Paris and Constantinople at the exchange of the day; but the first Coupon, payable on the 15th October next, will be for three months' Interest, and will be attached to the Scrip.

An accumulative Sinking Fund will reimburse these bonds at par in sixty-one years by drawings to take place in London in July of each year, and repayment will be made on the 15th October following the drawing. The first drawing will take place in July, 1895. The Government reserves the right to increase the Sinking Fund after the 15th April, 1905.

Coupons not presented within six years, and drawn Bonds within fifteen years, from the time they become payable, will be forfeited.

Bonds will also be received for conversion in Paris and Constantinople.

New Court, 5th June, 1894.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (June 7) as follows:—The mining market is without any improvement; the dulness of tin precludes all enquiry for shares, and prices remain much the same:—Closing prices: Blue Hills, 10s. to 11s. 6d.; Botallack, 1 to 1¼; Carn Brea, 9¼ to 9¾; Devon Consols, 1 to 1⅛; Dolcoath, 70 to 70½; East Pool, 9¾ to 10; Killifreth, 3¼ to 3⅜; South Crofty, 1⅝ to 1¾; South Frances, 1 to 1⅛; Tincroft, 12⅛ to 12¼; West Frances, 2⅛ to 2⅜; West Kitty, 6¼ to 6½; Wheal Agar, 2⅛ to 2⅜; Wheal Basset, 2⅜ to 2½; Wheal Grenville, 16¾ to 17; Wheal Kitty, 9s. to 10s. 6d.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers, and Mining Share Dealers, Redruth, write under date of Thursday, June 7:—Quotations herewith (fouro'clock):—Blue Hills, ½ to ¾; Carn Brea, 9¼ to 9¾; Cook's Kitchen, ⅛ to ⅜; Dolcoath, 71 to 72; East Pool, 9¾ to 10½; Killifreth, 67s. to 69s.; Phœnix, 1s. to 3s.; Polberro, 1⅛ to 1⅜; South Condurrow, ⅝ to ¾; South Crofty, 1⅜ to 2; South Frances, ¼ to 1; Tincroft, 12¼ to 12¾; West Frances, 2 to 2½; West Kitty, 6¼ to 6¾; Wheal Agar, 2¼ to 2½; Wheal Basset, 2¼ to 2¾; Wheal Grenville, 17 to 17½; Wheal Kitty, 9s. to 11s. Tin, 71¾. Market has been very quiet during the past week

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write, June 7, 1894 (noon):—Business generally has been restricted during the past week, with, however, some little activity just here and there. The instances where this comparative activity is to be found have been chiefly where special circumstances have ruled, as in the case of Scotch stocks, where the outlook regarding labour troubles in the coal trade have brought about some free selling, and consequent depreciation in prices. Whilst during the earlier portion of the week home rails remained steady, and in some cases went better, latterly the depression in "Macs" spread, and the result is a general decline, the exceptions to the rule being very few and at the same time very small in amount, only ⅜ per cent. at the best. Amongst declines the following are prominent, viz.:—South-Eastern Deferred 1⅛, North British New Ordinary 1, Caledonian Deferred 1, ditto undivided stock ½ to ⅝, and Great Eastern 1. Brighton A is ⅜, and several others lower in small fractions. Canadians show several issues lower, both in Pacifics and Trunks, but the fall does not amount to much in any case. Americans are distinctly better in tone, and though one or two declines are to be noted they are not large in amount, the worst being drop of $\frac{1}{32}$ in Atchison Ordinary. On the other side Atchison Income Bonds are $\frac{1}{32}$ to $\frac{1}{16}$; Milwaukees, $1\frac{1}{16}$; Eries, $1\frac{1}{16}$; Louisvilles, $\frac{3}{32}$; and several others higher to the extent of $\frac{1}{32}$ or smaller, Mexicans are neglected, the only changes being rise of ¼ in First Preference and fall of a similar amount in Second Preference. Consols have made a further advance of ⅛ on the past week. Colonial Government Bonds, &c., but little altered. Higher: South Australian Registered Stock, ⅛. Lower; Canada Registered, 1; and Victoria inscribed, ⅛. Home Corporation stocks, &c., continue to appreciate in value when any move is made. Manchester Four per Cent. is 1, ditto Three per Cent. ⅛ to ¼, and Birmingham Three and a-Half per cent. higher, there being no declines to set against them. In foreigners the record is a contradictory one. Higher: Italian Rentes ⅛, Spanish Four per Cent. ⅜, Mexican Six per Cent. ⅛, Egyptian Unified ⅜, and Portuguese Three per Cent. ⅛. Lower: Argentine Six per Cent. 3 to 3⅛, ditto Five per Cent. 1⅛; Brazilian Four per Cent. 1, Turkish (1854) ⅛, ditto (1871) ⅛, and Uruguay Three and a-Half per Cent. ⅜. Business in the Miscellaneous share makets has been very meagre during the past week. Transactions very straggling all round, save for some stir in ship canal issues, and reach altogether but a poor total, so poor a total, indeed, that it is far below many past weeks, not altogether excepting recent holiday times. Notwithstanding the paucity of business a fair amount of attention has been given to current quotations, but with (on the whole) a very contradictory result, although in one or two sections there have been changes more or less distinct in character.

BANKS.—Beyond a few repetitions of markings in Salfords and (to a less extent) in Unions, business very small. Prices are changed as follows:—Higher: National Provincial ⅛, Adelphi ⅛, Bank of Liverpool ⅛, and Mercantile of Lancashire 1-16.—Lower: Parr's ⅛, Imperial Ottoman ⅛, and Consolidated 1-16 to ⅛.

INSURANCE.—Less business reported than for a long time back. Quotations show the following variations, however, viz., Higher: Royal ⅛, Boiler Insurance and Steam Power 3-16, London and Lancashire ⅛, Globe Accident 1-16, and Reliance Marine 1-16. Lower: Liverpool and London and Globe ⅛, British and Foreign Marine ⅛ to ⅛, and Manchester Fire ⅛.

COAL, IRON, &C.—Nothing doing, save for a few lots of Ebbw Vale changing hands at or about late prices. Staveley Carr 1, Bolckows' fully-paid ⅛, and Dorman Longs ⅛ lower; but, on the other side, Rhymneys are 1s. 6d. per share better.

MINES.—Only a lot or two of Tintos done. Ooregum are 1-16 higher. Mason and Barry are ⅛, Consolidated Gold Fields 1-16 to ⅛, Cape Copper 1-16, and Rio Tinto 11-16 lower.

COTTON SPINNING, &C.—Perhaps a little more disposition to offer, but the offers are still very low; so low, indeed, that very little business results.

TELEGRAPHS AND TELEPHONES.—National Telephone are 1 16, Anglo-American Telegraph preference 3⅛, ditto ordinary 1, ditto deferred ⅛, and Eastern ⅛ higher, whilst there are no declines to set against them.

BREWERIES.—Allsopps are again higher (1⅛ on the week); Mooffalls are ⅛ to ⅜; Boddingtons, ⅛; and Taylors, ⅛, higher. Parkers, ⅛; and Springwell, ⅛, lower. Brunner Monds have had a good rise, particularly the £8⅛ paid, which are 4¼ up, the other two issues being 1¾ each higher. Gas Light and Coke A are 3, and Liverpool Gas 2 up. Coats have improved to the extent of ⅛, and several others fractionally better. On the other side, Suez Canal is ⅛, Eastmans 5-16 to 7-16, Seddons Tyres, 3s., and a lot of others lower in small fractions. Ship Canals for most part of the week were steady and sometimes firm at full prices ruling last week, and at one time showing some advance on both issues, but a statement made yesterday at the City Council meeting by Sir John Harwood (a Corporation director) giving a *resume* of the doings of the Canal since his connection with the board, and also his views regarding the present and prospective condition of the finances and obligations of the Canal, seriously affected prices. They opened this morning just round about £2 and £3 respectively for ordinary and preference issues, indeed, ordinary were done a trifle under £2. Up to writing they had steadied a bit, being buyers at previous selling prices, but there is but small public support even at the lower figures.

LATER (4.0 P.M.)—Home Rails generally have been enquired for, Sheffield Deferred prominently so, but Scotch stocks have been free sellers again, losing about ⅛ each on the day. Canadians and Americans have been quiet, but coming better from New York, the opening was firm, and the improvement is maintained down to the close here. Ship Canal ordinary not quite so good as at noon, but still some little better than at the first this morning. Preference shares have maintained their improvement, which came on shortly after the start of business to-day.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (June 7), writes:—During the past week business has been inactive. Unsettled weather, dull metal markets, and the threatened strike of the Scotch colliers, have all been against prices. The continued cheapness of money is, however, stimulating purchase of securities suitable for investment.

In shares of coal, iron, and steel companies prices do not show much alteration. Bolckow Vaughan are at 10⅛, Cairntable Gas Coal 8½, Ebbw Vale 8⅞, Niddrie and Benhar 39s. 6d., Rhymney 29s., Steel Company of Scotland 54s., Stewart and Clydesdale 8 9-16d, and Wilson's and Clyde Coal 9½.

In shares of copper concerns prices are lower in sympathy with the market for the metal. Tharsis declined to 90s. and Tinto to 13⅜, but are now both a little better. A dividend of 1s. 6d. is payable on Copiapo shares on June 21, and of 1s. 3d. on Cape Copper on July 2. Mason 47s. 6d. to 52s. 6d.

In shares of gold and silver issues a fair amount of business has been done. Montana have improved to 6s. Last month's output was $68,000, and expenses $51,500. Excepting Mysore, the returns from the Indian mines for last month are good, especially Ooregum, which is the largest the company has yet had, although the machinery was only running full for three weeks. The shares, which had declined to 84s. 9d. on sales to close an estate, have recovered to 91s. Wemmer have improved on dividend expectations. A dividend of 1s. 3d. and call of 6d. is announced on Frontino. Tolima better on the estimated profit for May (over £2500), which is satisfactory on the restricted output and low price of silver. African Gold Recovery are at 35s. 9d.; British South Africa Chartered, 34s.; Broken Hill Proprietary, 54s.; Bechuanaland, 31s. 6d.; Cassel, 20s. 6d.; Consolidated Gold Fields of South Africa, 47s. 6d.; Caratal, 6d.; Carrington, 2s.; Emma, 4d.; Edwin Bray, 2s. 3d.; Flagstaff, 7⅛d.; Golden Gate C.T., 1s.; Gold Fields of Mysore, 23s. 9d.; New Aurora West, 5s. 6d.; New Guston, 16s.; Orita, 2s. 9d.; St. Augustine, 1s.; Springdale, 2s. 6d.; South African Trust and Finance, 2s.; and True Blue Block, 2s. 6d.

In shares of miscellaneous companies prices are steady. In oil companies the only dealings have been in Broxburn at 8⅜, and Young's 20s. Lawes' Chemical are at 6⅜, Nobel's Explosives 13, Phospho Guano 70s., and Roburite Explosives 25s.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of June 7: The disturbances in the coal trade have affected the prices of North British and Caledonian Railway Deferred Stocks. The former has fallen from 40⅜ to 39⅛, and the latter from 44 9-16 to 43¼. The demand for safe investments has been continued, and a number of Railway Preference Stocks have risen 2 to 4 per cent. Bank Stocks have been in strong demand, but the increased prices seem now to be bringing stock to the market. Bank of Scotland has risen from 330 to 334, and British Linen has changed hands at 400, showing a rise of 10. National has fallen from 340 to 340½; Royal from 246½ to 247½, Commercial from 70 to 70¾; Clydesdale from 20½ to 20¾. In Insurance shares, Caledonians have risen from 26 to 27, North British and Mercantile from 34⅜ to 34 15-16, Royal from 47½ to 48, Standard from 60 to 60½, Scottish Union and National A from 81s. to 83s., Alliance have receded from 9⅜ to 9⅛, Scottish Accident from 33s. to 32s., Scottish Metropolitan Life from 36s. 6d. to 36s. Rosewell Gas Coal have fallen from 7 to 6¾, at which they are offered. Coats 8s. 9d. higher, at 17 15-16.

SALES BY AUCTION.

*** Advertisements are inserted in this column at the rate of 8d. per line with a minimum charge of 4s.

NORTH WALES.

COUNTY OF CARNARVON.

PARISH OF PENMACHNO.

NEAR BLAENAU FESTINIOG.

IMPORTANT TO CAPITALISTS, SPECULATORS, INVESTORS, QUARRY OWNERS, AND OTHERS.

MESSRS. W. DEW and SON will OFFER for SALE, BY PUBLIC AUCTION, at the Queen's Hotel, Blaenau Festiniog, on FRIDAY, the 6th day of July, 1894, at Two o'clock in the afternoon, that

VALUABLE FREEHOLD PROPERTY

KNOWN AS

TYDDYN BACH,

comprising about 290 ACRES of LAND under which Valuable SLATE VEINS have been proved to exist. The

RHIW BACH SLATE QUARRY,

including all the COSTLY and MODERN MACHINERY,

37 COTTAGES and a CHAPEL in Cwm, Penmachno, erected under Building Leases granted by the late Owners,

3½ MILES OF RAILWAY AND WATER RIGHTS.

This Quarry when work was stopped was producing about 180 Tons of Slate per Month, and these obtained a good market and ready sale amongst first-rate customers in the home trade.

The property being Freehold no Royalty or Rent is payable on the produce.

Several Valuable SLATE VEINS have been proved to exist under this property, but only two have been worked—viz., the "North Vein" and the "New Vein."

Deep Borings with the Diamond Drill Apparatus have been made on both the Eastern and Western portions of this Estate, yielding Cores from 1 inch to 4 inches diameter, with most favourable results. The Cores, which have been carefully preserved, can be inspected at the Quarry.

Comprised in this Estate and included in the Sale are Tyddyn Bach Farm and Sheep Walk, Freehold Ground Rents, &c., &c., and these with other small rentals make up a total annual rental of £110 2s. 10d., and this apart from any profits arising from the Quarries or Railways.

NOTE.—Mr. R. G. PRITCHARD, of Castle House, Penrhyndeudraeth, R.S.O. (the Manager of these Quarries), will be glad to show the Property and give the fullest information to all intending Purchasers, provided they give him two or three days notice.

Copies of these Particulars, with Plans, Sections of Bore Holes, Conditions of Sale, and a Schedule of the Machinery may be obtained on the Premises; of Mr. R. G. PRITCHARD, as above; at the AUCTIONEERS' INSTITUTE, 57, Chancery Lane, London; or of the AUCTIONEERS, Wellfield, Bangor.

BANKING.

ESTABLISHED 1851.

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TWO-AND-A-HALF per CENT. INTEREST allowed on DEPOSITS repayable on Demand.

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For the encouragement of Thrift, the Bank receives small sums on Deposit and allows Interest monthly on each completed £1.

The Birkbeck Almanack, with full particulars, post free.

FRANCIS RAVENSCROFT, Manager.

HERBERTON (WILD RIVER) TIN LODES NORTH QUEENSLAND.

Every information relative to the progress of lode-tin mining in the Wild River district (termed by geologists "The Cornwall of Australia") can be obtained by communicating with the undersigned. CHARLES JENKIN.

"Herberton Advertiser" Office, Herberton, September, 1893.

COMPANIES AND LEGAL ANNOUNCEMENTS.

*** Advertisements are inserted in this column at the rate of 9d. per line with a minimum charge of 7s. 6d.

THE CAPE COPPER COMPANY (LIMITED).

9, Queen Street Place, London, E.C.,
6th June, 1894.

NOTICE IS HEREBY GIVEN, that at a Meeting of the Directors of this Company it was resolved—

"That a dividend of 1s. 3d. per Share be declared on the Cumulative Preference and Ordinary Shares, free of income tax, payable on the 2nd day of July, 1894, to the shareholders on the books of the Company on the 16th day of June, 1894, and that the Transfer Books be closed during the said 16th day of June, 1894."

Preference Coupons No. 5 and Ordinary Coupons No. 17 will be paid at the above rate, free of income tax, on presentation at the Company's office.

By order of the Board,
J. C. LEAVER, Secretary.

THE FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that the HALF-YEARLY MEETING of the Shareholders of this Company will be held at Winchester House, Old Broad Street, in the City of London, on WEDNESDAY, the 27th day of June, 1894, at Two o'clock p.m., for the following purposes:—

To receive the Report of the Directors, and the audited Statement of Accounts of the Company for the six months ending the 31st December, 1893; to declare a dividend; and for other business.

The Transfer Books of the Company will be closed from Monday, the 18th day of June, until Saturday, the 30th day of June, 1894, both days inclusive.

By order of the Board,
J. JAMESON TRURAN, Secretary.
184, Gresham House, Old Broad Street, London, E.C.,
4th June, 1894.

THE MYSORE GOLD MINING COMPANY (LIMITED).

6 and 7, Queen Street Place, London, E.C.,
7th June, 1894.

AT a Meeting of the Directors, held this day, it was resolved—

"That an Interim Dividend (free of Income Tax) of 2s. per Share be, and is hereby declared, payable on the 11th day of July, 1894, to the Shareholders on the Books of the Company on the 23rd instant, and that the Transfer Books be closed during the said 23rd instant."

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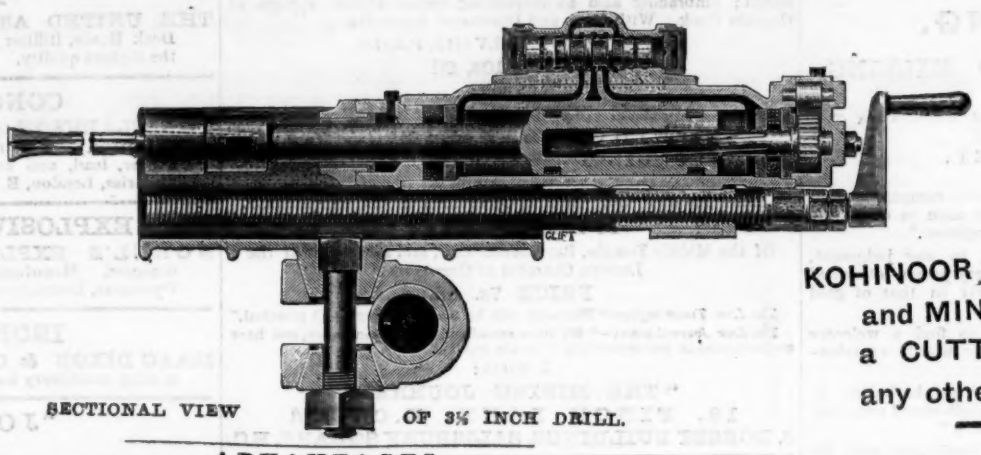

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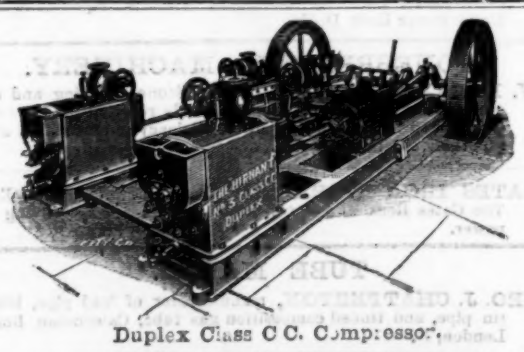

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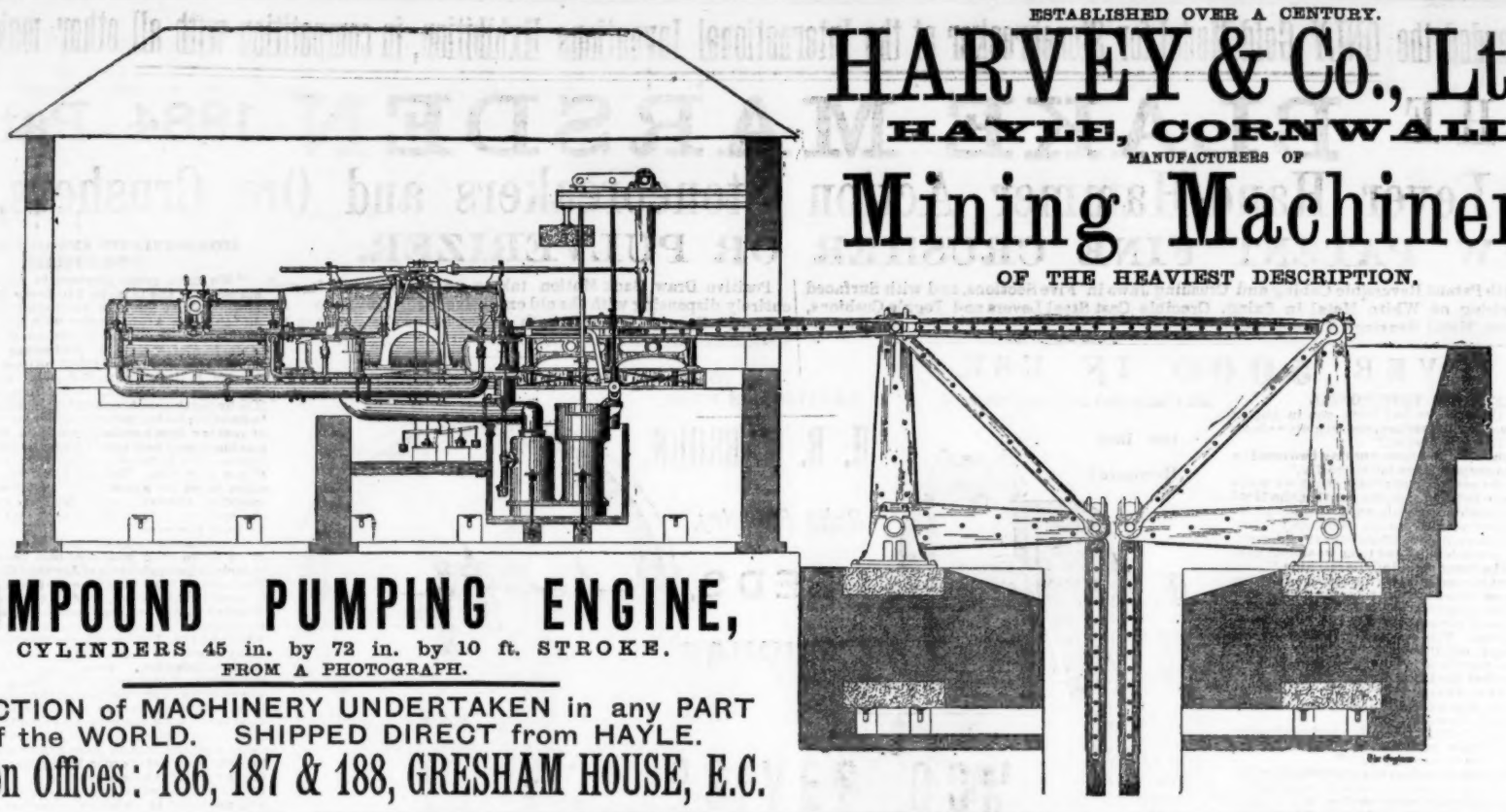

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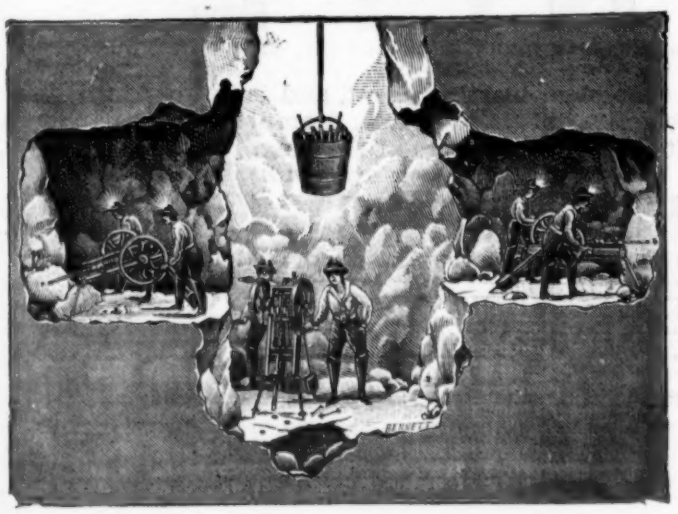

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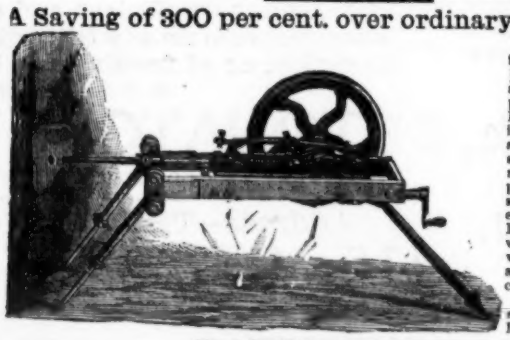

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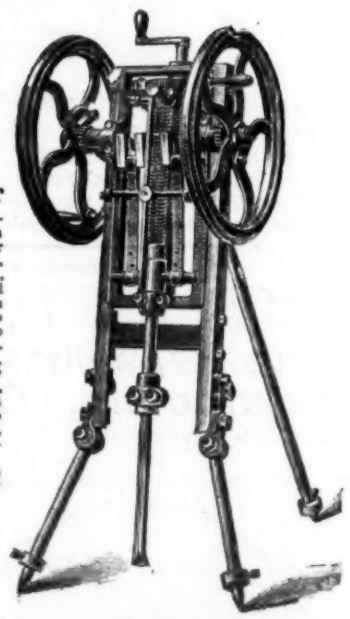

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Awarded the ONLY Gold Medal for Stonebreaker at the International Inventions Exhibition, in competition with all other makes.

THE BLAKE-MARSDEN 1884 Patent

Lever Hand-Hammer Action Stonebreakers and Ore Crushers,

NEW PATENT FINE CRUSHER OR PULVERIZER.

Fitted with Patent Reversible Cubing and Crushing Jaws in Five Sections, and with Surfaced Rocks, requiring no White Metal in fixing. Crucible Cast Steel Levers and Toggle Cushions, Brass or Gun Metal Bearings throughout.

Positive Draw Back Motion taking no power to work, and entirely dispensing with the old expensive Steel Embedde .R. Spring. The motion or length of Stroke of the Jaw can be increased or decreased at pleasure, to suit any material.

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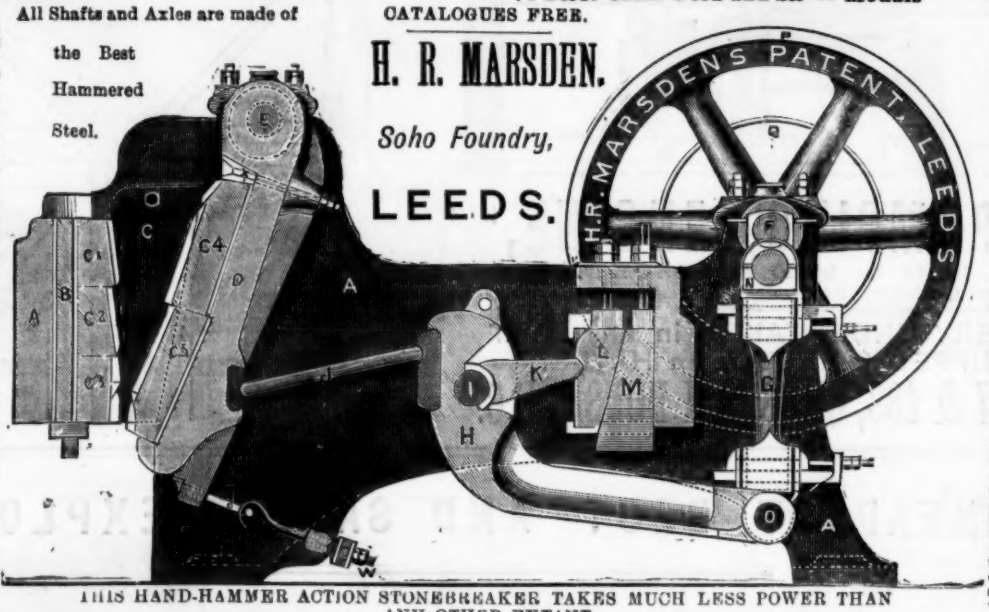
All Shafts and Axles are made of the Best Hammered Steel.



THIS HAND-HAMMER ACTION STONEBREAKER TAKES MUCH LESS POWER THAN ANY OTHER EXTANT.

PULVERIZER TESTIMONIAL

"The Fine Crusher we had from you in August last is an excellent pulverizer, and rapidly reduces hard material to a fine powder."

"The Pulverizer has now been working two months, and answers its purpose most satisfactorily."

"It is with the greatest satisfaction that we write these few lines in order to acquaint you that the 12×3 Pulverizer you provided us with, has quite fully given the results you represented to us, completely reducing our material to an impalpable powder at one operation. Should you refer any one to us we should have much pleasure in recommending the machine."

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverises them with equal success. You can put in a small paving stone and bring it out like flour."

"In reply to your favour, I have much pleasure in informing you that the 12×3 Pulverizer we had from you is giving us every satisfaction. The material we are operating on is an exceptionally hard one. I am well satisfied with its working."

"Our experience is that the motion and mechanical arrangements of your machine are the best for pulverising that we have ever met with"

"The reports from our mines as regards the working of your Fine Crusher (20×5) recently supplied are very favourable, although we cannot quote you exact figures. On being got into position it was tried by Acad, with the result that it made short work of the biggest pieces of ore we put into the hopper. You might s. y how long you would take to deliver another of the same size."

"As I once before stated, your machine is a perfect pulverizer."

"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam, and our engine, which is a 12-h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

STONEBREAKERS AND ORE CRUSHERS. TESTIMONIALS.

"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in Lever Hand Hammer Motion Stone Breaker you supplied us with. We find that our 4 h-p. Engine with ease drives it 200 revolutions per minute, and breaks six ton per hour of the hardest "Diorite" Whinstone: the sample is much before any hand-broken we have ever got done. Our Mr. P. J. GRAHAM, C.E., who was Surveyor of Highways for ten years, before joining our firm, says: It is by far the most economical machine he ever had to do with; he had two of your former make, and two of another firm's make; compared with these four machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken macadam is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. I is by far the best sample we have ever seen."

"I now order three of your Stone Crushers, size 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 24×13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and I could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased seven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

BENNETT'S

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A Distinguishing Feature in these Goods is THREE SEPARATE CENTRE THREADS IN THE COLUMN OF POWDER. The make may always be recognised by these Threads, and users are cautioned to look for them and see that they have the Genuine Article.

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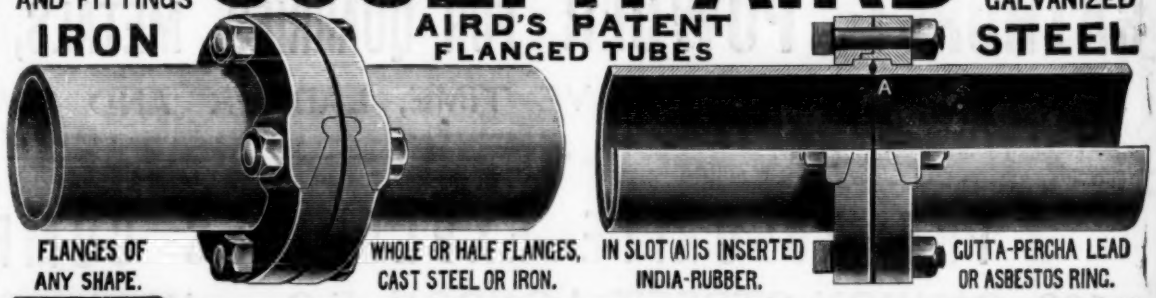
SCREWED AND SOCKETED TUBES AND FITTINGS IRON

JOSEPH AIRD

AIRD'S PATENT FLANGED TUBES

ALL SIZES PLAIN OR GALVANIZED STEEL



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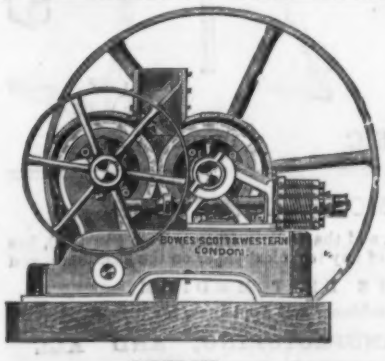

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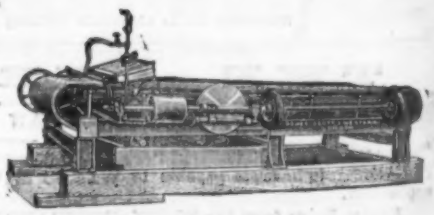

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